

BICYCLE TOURISM PLAN FOR ECONOMIC DEVELOPMENT:  
A TEMPLATE FOR RURAL AGRICULTURAL TOWNS  
AND A CASE STUDY FOR THE CITY OF  
WINTERS, CALIFORNIA

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by  
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## ABSTRACT

### Bicycle Tourism Plan for Economic Development: A Template for Rural Agricultural Towns and a Case Study for the City of Winters, California

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Bicycling is a method of tourism transportation that is healthy, non-invasive, environmentally responsible, and economically sustainable. It allows freedom, mobility, and sightseeing potential that is not made possible by other modes of transit. Thousands of bicycle tourists travel from all over the globe annually to explore California on touring bikes via established cycling routes and robust determination. Thousands of additional domestic and international visitors take weekend trips, plan family vacations, travel for business, or tour California from abroad, many of whom are excellent candidates for local and regional bicycle touring at a more gentle intensity level.

The increasing popularity and prominence of bicycle tourism, among both domestic and international travelers, carries great potential for economic benefit to local communities. Rural and agricultural communities can particularly benefit from bicycle tourism, as these communities do not normally experience the benefits of tourism as significantly as their urban, coastal or mountainous neighbors. Tourism that is developed in accordance with the size, scale, constraints and character of a particular community can have a beneficial effect on the economics and industry of the area. Infrastructure projects to this effect, such as development of a town or regional trail system, wayfinding features, or other resources come with benefits for visitors and locals in the form of recreation, public health, mobility, and access to food, drink, amenities, scenic areas, jobs and commerce. Trails may further improve the economy of the local housing market, as proximity to trails has a positive effect on housing values. Incorporation of agricultural destinations into local tourism planning creates a draw for visitors and can become a mutually beneficial relationship – contributing to the economic stability of the agriculture industry, preserving local farm lands, increasing tourism revenue and educating the public on the importance of local farming. Through careful planning of the touristic components of the destination, rural communities can achieve multifaceted economic benefits of diverse and versatile tourism amenities.

Keywords: tourism, bicycle tourism, agritourism, ecotourism, economic development, bicycle planning, trails, bikeways, trail network

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## **I. INTRODUCTION**

Bicycle touring is a fun, healthy, and effective method of sightseeing. It is popular all over the world, with origins in Europe and a long history in the United States. Both domestic and international tourists are increasingly seeking to improve their health and wellbeing and to experience environmentally sustainable tourism.

California is a famous and popular destination for bike touring and outdoor tourism recreation. It is an ideal place in which to do so, due to moderate temperatures, Mediterranean climate, varied geography, scenic beauty, and strong road network. Highway 1 is a major attraction for bike tourists, drawing international visitors who traverse the west coast from British Columbia and the Pacific Northwest to points south as distant as San Diego or Cabo San Lucas, many of whom using this world-famous route as a jumping off point to explore the interior region of the state. Other cyclists enjoy smaller day or weekend rides to visit scenic areas off the beaten path.

A major market exists for bicycle touring. Many established and well-regarded bike touring companies take riders on specialty adventures of varying durations, intensity levels, locations, and themes. Themes include wine country, lakes, rivers, state and national parks, mountains, deserts, forests, coastlines and urban areas. Durations offered range between three and ten days, tours are geared toward riders of all levels, and run year-round. Many cyclists also strike out alone and tour the state without the help of a touring agency, relying on resources such as cycling associations and advice from fellow cyclists. Cycling associations have had great success in organizing rides for families and seniors, compiling information and maps for traveling cyclists, establishing bike routes and generating interest, support and incentive for the sport of cycling.

Tourism in California is expected to rise continuously over the foreseeable future in both visits and expenditures, according to Tourism Economics California Travel & Tourism Outlook published late last year. California travelers are increasingly interested in the environment, affecting their destination selection as well as the activities they choose during their vacation

(Economic Vitality Corporation, 2008). This trend indicates an increase in bicycle touring, along with other ecotouristic activities, for both long and short durations.

Several California cities, as well as cities in other regions of the U.S. with a similarly significant bicycle tourist population, have done an exceptional job of capturing and accommodating the bicycle tourists passing through the region. Case studies of these cities are included in a subsequent section.

## **II. LITERATURE REVIEW**

### **The Rise of Bicycle Tourism**

Bicycling is a fast growing trend in the travel industry, and tour operators and tourism planners have begun to take notice. Bicycling has grown overall in interest in the last decade – a 71 percent increase in San Francisco and a 47 percent increase in Minneapolis, for example (Adventure Cycling Association). Many cities and regions have reported similar trends, including SACOG's 2011 Economic Vitality Report. This overall shift in the trend of bicycling culture has translated to tourism as well. No longer geared only toward the athletic elite, travelers are increasingly embracing bike touring to stay active, minimize environmental impact, and experience diverse landscapes and cityscapes at a closer, more personal level. This mode of travel enables travelers to appreciate the native plants, wildlife, and natural beauty of the area that one may not notice on a tour bus or traveling by car.

Cycling associations and tour companies have also experienced burgeon. The Adventure Cycling Association reported record highs in revenues, participation, and interest in 2011 and since. BikeHike Adventures, an international tour company based in Vancouver, British Columbia, finds that cycling trips are exceptionally popular and increasing in demand. Particularly successful are destination trips that have a built-in goal or theme, for example a coast-to-coast route in Scotland that is among their most popular trips. ExperiencePlus! Bicycle Tours in Colorado has had great success with bike tourism as well. They emphasize the ecological benefits of travelers who choose to sightsee by bicycle rather than by car. Other tour companies specialize in shorter, low intensity trips, such as weekend or overnight ventures.

Bicycle tourism studies from around the world, compiled in 2012, indicate that bicycle travel of all kinds are booming. Short and long trips, luxury and cheap, big events and small tours are all enjoying a level of popularity that hasn't been seen since the 1970s when bike touring experienced a major renaissance. According to researchers in the United Kingdom and the Netherlands, the European bike tourism sector generates 2.3 billion cycle trips in Europe every

year, including day trips and overnight trips that take visitors to rural areas that are not often visited by other tourists. This sector generates about 44 billion Euros annually as of 2012, equivalent to about \$57 billion (Lancaster, 2012). This economic revenue benefits large cities and also the small towns reachable by bicycle that are often bypassed by tourists using other modes of travel, such as bus and car. Cycle tourism disperses visitors to areas that traditionally do not attract tourism and supports employment in local economies.

Global interest in the bike tourism business is growing. The Adventure Travel World Summit in Lucerne, Switzerland in 2012 hosted more bike tour operators than ever. Attendees came from Croatia, Southeast Asia, Colombia, Namibia, Venezuela, Germany, Cuba, Montenegro, New Zealand, Brazil, and more (Sayer, 2012). Many tour operators in attendance have recently expanded their service to include bicycle touring, building on their traditional walking and trekking tours, because of the growing revenue stream generated by bike travel. Companies at the Summit noted significantly higher demand for their bike-tour offerings than in previous years. Classic bike journeys such as Bhutan's Thunder Dragon Ride and Nepal's Pokhara to Kathmandu attract double the numbers that they did in 2011. Road and mountain biking tours are spreading through India, Morocco, and Thailand. European bike tourism study researchers surveyed hundreds of bike tour operators on the continent and reported a rising demand for cycle tourism, in contrast to 2009 when demand was flat (Bateman, 2012).

Many large bike route networks are underway. Countries, states, and provinces worldwide are creating more extensive and complete bicycle route networks for use by locals and tourists. Bicycle trails are now considered an attraction for tourists. La Route Verte in Quebec, Canada is a system of urban, suburban and rural bikeways that has grown over the last five years from 4,000 km to more than 5,000 km (<http://www.routeverte.com/rv/home>). EuroVelo is Europe's 70,000 km continental system of bike routes that is underway and aims to be a completed network by 2020 (eurovelo.org). The United States is creating an official U.S. Bicycle Route System (USBRS) as a collaborative project between agencies, governments, and non-profits. In the last three years, eight new U.S. bicycle routes have been approved, and 41 states are now on

board the project and in the phases of planning, implementing, and installing signage. At the state level, agencies are developing unique route networks, many of which dovetail with the USBRS. States are researching, mapping and establishing individual and connected regional bike route networks, such as the Great Lake region, the Adirondack region, Oregon's statewide scenic bikeway system, and the Great Divide Mountain Bike Route (Adventure Cycling Association).

More states and provinces in North America are studying the economic impact of bike tourism. As of 2012, only Wisconsin and Colorado had conducted in-depth studies of the economic impact of biking and bike tourism. Wisconsin researchers found that bike tourism generated \$924 million from in-state and out-of-state visitors (Wisconsin DOT). In 2012, Oregon, Michigan and Arizona began economic impact studies. An impact study of La Route Verte, the provincial cycling network in the province of Quebec, is currently underway. The increase in studies being done on bicycle tourism indicates the sector as one of growing importance.

Bike events are expanding in the U.S. Attendance at large, multi-day bike events is higher than ever, as is fundraising at these events. The Bicycle Tour Network (BTN) is an online catalog of multi-day recreational bicycle tours. New tours are springing up in cities and counties all over the U.S., and California is among the more popular destinations for bike rides, events, and triathlons ([bicycletournetwork.com](http://bicycletournetwork.com)). The BTN experienced its largest turnout to date at its annual conference in Denver, Colorado in 2013 (Adventure Cycling Association). It has begun an economic impact survey of its events as well.

States are investing in bike tourism marketing and publicity. Oregon and Minnesota began the effort in 2012 by advertising their cycle tourism infrastructure on television and websites. Other states and tourism bureaus are now following, as they realize the financial value of cycle tourism and how it can benefit from effective marketing. A range of stakeholders are backing these efforts including health, tourism, governmental, and non-profit agencies. PedalMN.org is Minnesota's website for promoting bicycling and provides maps, resources, events and more.

More rural communities have started to invest in bike tourism. These towns have discovered that attracting cycle tourists is a low-cost, high yield endeavor. Rural towns with proximity to established bicycle routes are having particularly great success. The Adventure Cycling Association has documented the efforts of many small communities to develop facilities for cyclists, as will the subsequent section of this document. The increase in this type of revenue capture for small towns and rural communities is an indicator of increasing bicycle tourism, and also provides sustainable infrastructure to keep the industry alive.

Bicycle tourism-related sales have taken off in the U.S. Wayne Borroughs, longtime owner and operator of a bike shop in Fort Collins, Colorado, and then an online store, has watched the industry grow. While touring supplies (panniers for example) were uncommon six or seven years ago, he now sees that changing. He says the standard road biking crews now ride loaded-up bicycles long distances, the “bikepacking” crews are riding trails like the Great Divide, and adventure travel companies are doing bike tours (Lesser, 2012). The Adventure Cycling Association (ACA) has experienced back-to-back exceptional years. They were \$30,000 dollars in debt in 2005 and are now netting positive numbers that continue to increase. ACA membership has gone up 19 percent, map sales are up 48 percent, and donations have tripled (Bateman, 2012).

### **Tourism in California**

Tourism in California is forecasted to increase annually by several percentage points each year for the foreseeable future, according to Tourism Economics’ California Travel and Tourism Outlook Report published in the third quarter of 2014. Economic Vitality Corporation has further identified nationwide trends in specific tourism demand, summarized below.

Tourists are increasingly interested in the **environment**, more likely to select destinations and activities that emphasize the environment. Locations that offer outdoor recreation and a

connection with nature have a competitive advantage over destinations that do not. Travelers are becoming more engaged in rural activities and seek out rural atmospheres.

Many families travel with **children**, and one in four household trips include children. Popular travel activities for children include outdoor activities, shopping, and attending social or family events.

Many travelers make an effort to **exercise** or engage in **physical activities** while traveling, many using a gym or fitness facility on the road, or utilizing local outdoor facilities such as trails and pedestrian paths.

**Family reunions** are a common reason for travel. Thirty five percent of U.S. adults have traveled to a family reunion in the past three years and 22 percent have attended a family reunion in the last year. Aside from being held in someone's home, the most popular destinations for family reunions are city or town parks and national/state parks or forests.

**Weekend trips** are more popular than ever for domestic travelers, becoming even more common than longer trips. Half of all U.S. adults take at least one weekend trip per year. Some take more, with almost 30 percent having taken five or more weekend trips in the past year. Interest in longer trips (more than one week one week) has declined over the last five years. Shorter trips are likely due to increasingly busy weekday schedules, work commitments, time constraints, and hectic daily lives. These factors indicate that travelers are looking for convenient, hassle-free experiences, which places importance on convenient booking methods and travel accommodations. Additionally, many weekend travelers make last minute plans, also indicating the necessity of convenient and flexible booking. Thirty percent of weekend travelers take advantage of discounts, coupons, or special events when planning their trips, which presents tourism planners with a convenient and straightforward way to attract the weekend tourism market. Finally, weekend travelers favor small towns, cities, beaches, mountain areas, lake areas, and state or national parks as destinations.

**Cultural events, festivals, historical places, and museums** are popular as destinations and as stops along a trip. More than 50 percent of adult travelers had included a historic activity or event on a trip in the year prior to the study, with popular destinations including historic buildings, landmarks, monuments, communities and towns. Seventy five percent attended a cultural activity or festival on a trip, with the most popular being performing arts events, art museums, and antique establishments.

Travelers tend to be **computer and internet** savvy. Two thirds of travelers who use the internet used it to make travel plans in the year prior to the study, and for frequent travelers the percentage was 70. Bookings are largely online as well, with 45 percent of online travelers making reservations via the internet. The majority of online bookers used the internet for at least half of their travel booking at the time of the study, and the number had grown by 30 percent from the previous year. This indicates that online booking and planning will continue to increase. Online bookings include airline tickets, overnight lodging accommodations, and rental car reservations.

### **Demographics of Bicycle Tourists**

Cycling tourists can be divided into different market segments in a number of different ways based on a variety of factors. Demographic, frequency of ridership, distance ridden per day, speed, motivation, preferred location, preference for meals and accommodation, types of amenities, and budget per day are all factors that may be considered when dividing bicycle tourists into segments. For the best planning, all groups should be considered in the development of a cycling tourism strategy. Accommodating the widest range of cycle tourists will result in the most robust cycle tourism plan. This will involve a variety of trail and road conditions, lodging options, food choices, and amenity pricing.

A University of Oregon study, entitled Bicycle Tourism as a Rural Economic Development Vehicle, breaks down bicycle tourists into the three categories described in Table 1. Bike On



Tours, a cycle tourism company based in Ontario, Canada, has stratified bicycle tourists in the categories outlined in Table 2, below.

**Table 1: Types of Bicycle Tourists (University of Oregon, 2010)**

<i>Shoestring Cyclists</i>	Age: Young Daily Spending: \$15-\$30 Daily Mileage: 75-100 Preferences: Low cost camping, hostel and homestay accommodations; grocery stores; public showers
<i>Economy Cyclists</i>	Age: Any Daily Spending: Avg \$50; varied Daily Mileage: 50-90 Preferences: Varied. Grocery stores, restaurants, cafes, camping, hotels
<i>Comfort Cyclists</i>	Age: Older Daily Spending: \$75-\$100 Daily Mileage: 50-75 Preferences: Hotels, motels, bed & breakfast, cafes, restaurants, breweries, recreation, entertainment, visitation

**Table 2: Types of Bicycle Tourists (Bike On Tours, 2014)**

<i>Occasional</i>	Demographic: Young adults, families with children and mature adults. May ride with friends or family including children Frequency: Ride sporadically or only a few times per year Distance: Short distances, up to an hour or two, 5-10 miles Speed: Ride at a relaxed pace with frequent stops. Less than 12 miles per hour Motivation: Fitness, fun, family and social activity Preferred Location: Paths or sidewalks close to home, parks or recreational areas Undesired conditions: Riding with motor vehicles and hills
<i>Short Distance Riders</i>	Demographic: Mature adults and retirees. May ride with family, friends, group or solo Frequency: Regular weekly to monthly rides Distance: Day ride distances of 20 to 25 miles Speed: Moderate pace with frequent stops, 12 to 15 miles per hour Motivation: Ride for fitness and social or family connection Preferred Location: Rail trails, paths or roads with low volumes of motor vehicle traffic. Mostly near home with occasional longer group trips. Go on organized rides including internationally with arrangements for bicycles, accommodation and luggage Undesired conditions: Hilly rides and roads with motor vehicle traffic, particularly where there are no paved shoulders

	Travel Accommodation: Often prefer to stay in affordable accommodation – economical motels and restaurants
<i>Long Distance Riders</i>	Demographic: Mature adults and retirees. Ride with grown up children, family, group or solo Frequency: Ride frequently, weekly to monthly rides Distance: Day ride distances of 40 to 60 miles or more Speed: Usually ride at top speed with few stops, 25 to 30 kilometers per hour Motivation: Ride for fitness and joy of the experience Preferred Location: Well-maintained trails and paved roads with low volumes of motor vehicle traffic and paved shoulders. Enjoy rolling topography. Go on multi-day rides solo or with others close to home or on a cycling vacation. May travel internationally for rides that provide desired experience Undesired conditions: Trails that are non-challenging or too busy with other users Travel Accommodation: Accommodation and meals to match budget, sometimes the best available
<i>Competitive Riders</i>	Demographic: Young to mature adults with group or solo Frequency: Ride regularly to train and maintain fitness level Distance: Day ride distances of 100 to 160 kilometers [60 to 100 miles] or more Speed: Generally ride at top speed stopping only when necessary, 30 kilometers per hour or more Motivation: Ride for fitness and joy of experience, competitive challenge Preferred Location: Paved roads with low motor vehicle traffic and good paved shoulders. Multi-day rides solo or with others - particularly club rides. Challenging rides in terms of distance and hills Negatives: Trails are generally not suitable since they have other slow moving users and not designed for fast bicycling Travel Accommodation: Generally affordable accommodation for groups, college residences, budget motels or camping

Bike On Tours conducted a survey of their customers to collect data on bicycle tourists. The study found that tourists are primarily between ages 30 and 55. Further breakdown of age demographics concluded that 17 percent were under age 30, 44 percent were age 30 to 45, 33 percent were age 46 to 55, and 6 percent are over age 65. The study also looked at income levels, finding that the majority of cycling tourists were professionals with white collar jobs and annual incomes over \$60,000. Twelve percent had incomes between \$40,000-\$60,000; 47 percent had annual incomes of \$60,000-\$80,000; and 18 percent had incomes over \$80,000.

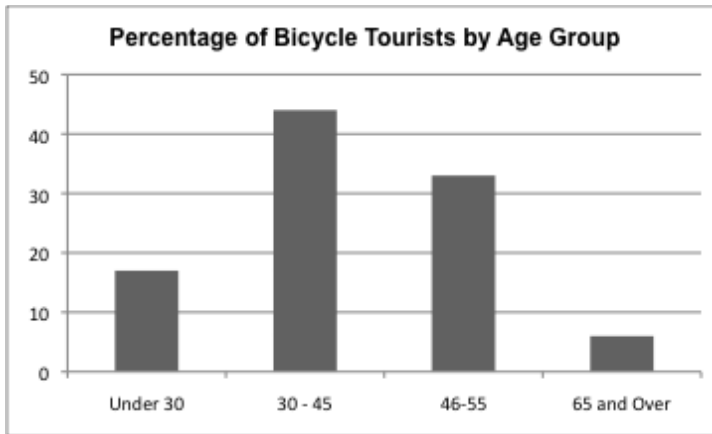


Figure 1: Percentage of Bicycle Tourists by Age Group (Bike On Tours, 2014)

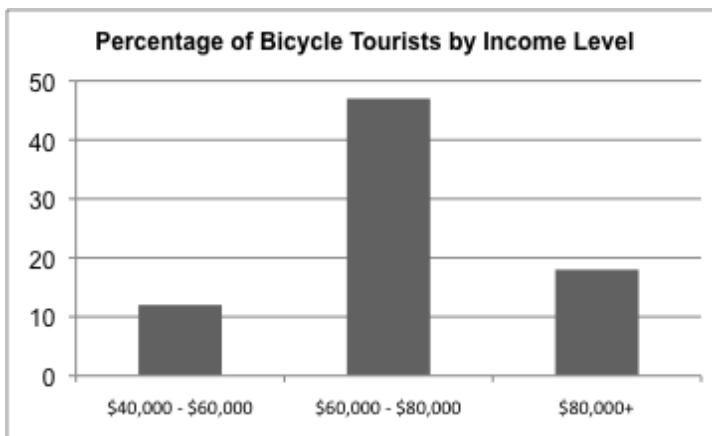


Figure 2: Percentage of Bicycle Tourists by Income Level (Bike On Tours, 2014)

While this type of demographic breakdown on bicycle tourists is helpful in understanding, anticipating, and providing for their needs in tourism planning, the studies also show that bicycle tourists are not a homogenous population. Their ages are diffuse, with a high proportion of children accompanying adults. Cyclists use all types of accommodation, from camping to five star hotels. They rely on cafes, markets, and restaurants of all types for a variety of meal preferences. They have a varying level of disposable income and contribute a range of economic stimulation to the areas and towns they visit.

Jeff Scully, president of Ortlieb USA, confirms the prevalence of the traditional 50-plus crowd, and also points out two other emerging demographics in recent years. "One is families doing shorter overnight trips, camping and/or picknicking along the way. The other is 20- and 30- somethings –

we're seeing more and more loading up a bike and going adventure touring or adventure backcountry touring" (Lesser, 2012). "Credit-card touring" is another attractive alternative to many bike tourists because of its ease: packing light and using lodging and restaurants instead of camping, cooking, and packing the associated supplies onto the bicycle.

### **Necessary Amenities**

Bike On Tours' survey found that their cycle tourists enjoy eating out, camping, canoeing, hiking, theatre, shopping, museums, historic sites, water sports, swimming and beaches, sightseeing, golfing, and skiing. It concluded that necessary amenities to attract bicycle tourists include bicycle friendly streets and paths that include adequate width for all road users. Access to scenic roads, natural areas, waterfronts, cultural and historic sites were also an attraction. Good restaurants were important to cycle tourists, as were accommodations with hearty breakfasts either provided or nearby. Bicycle repair shops were important as well as other interesting stores. Adequate and secure bicycle parking was imperative. Theatre, music and arts festivals were an attraction, and route maps and effective advertising were crucial.

The Adventure Cycling Association finds that bicycle tourists strongly prefer hotel accommodations where they may bring their bicycles into their hotel rooms. They also found that towns in which business owners are welcoming to bicyclists are drastically more appealing and pleasant than those who are not bike friendly. This can be reflected by general attitude of the business owners and merchants. It can also show in the presence of a bicycle pump at a local café, availability of basic bicycle repair parts such as tubes and wrenches at local stores, distribution of maps, and availability of healthy snacks at convenience stores such as energy bars or trail mix. Adventure Cycling also promotes that proper signage, advertising the availability of these simple goods, is imperative, as well as wayfinding signage for travelers still in the saddle.

## **Prominence of California Bicycling**

California is a prominent location for bicycling because of its ideal climate, scenic beauty, and relaxed culture. California municipalities are widely accepting of bicycles as a mode of transport and increasingly incorporating bicycle planning into their legislation. This is due to increased awareness of the need for climate action planning, a commitment to decrease emissions from vehicle use, and an attempt to increase public health and battle the obesity epidemic.

California is a draw for regional and international bicycle tourists because of its focus on bike routes, its vast and diverse landscapes, its natural beauty and its concentration of national parks and protected open space. The Pacific Coast Bicycle Route is one of California's most popular bike routes and hosts thousands of cycle tourists annually. With the outset to tour all or part of the Pacific Coast route, travelers stop in towns along the way take offshoot trips to other tourism or recreation attractions.

## **League of American Bicyclists**

The League of American Bicyclists is a tool for states, communities, businesses and universities to make bicycling a fundamental option for transportation and recreation. By designating entities as "bicycle friendly," it establishes bicycling as a priority in those areas, brings visibility and awareness to the activity of cycling, and puts the entity on the map as a bicycling destination. As more entities (cities, states, businesses and universities) become established as Bicycle Friendly Communities, bicycling becomes a safer and more comfortable activity for all people. The system combines the knowledge and experience of a multitude of transportation planners, engineers, government officials and bicycle advocates and provides a toolkit of projects, policies, programs, and plans designed to make biking better. The program aims to improve conditions for bicycling and provide assistance in implementation.

Cities and regions aiming to make a name for themselves as a bicycling destination should consider applying to be considered as a Bicycle Friendly Community by the League of American Bicyclists. In addition to receiving a rating of bicycle friendliness and inclusion in bicycle friendly maps and literature, association with the League provides information, guides progress, sets standards and provides assistance in bicycle planning and decision making.

## **Safety**

Rumble strips along State Highways are a major concern with regards to bicycle touring. Rumble strips were proposed in a technical advisory (TA) by the FHWA on many rural county roads that are important to traveling and recreational cyclists. While considered a “safety measure” to keep motorists from veering off the roadway, rumble strips pose a serious hazard to the bicycling segment of road users because of the divots they leave in the shoulder where bicyclists usually travel. Caltrans now mandates that where bicycles are permitted, shoulder rumble strips should not be used right of direction of travel unless a minimum of 5'-0” of clear shoulder width for bicycle use is available between the rumble strip and the outer edge of the shoulder. (State of California Department of Transportation, 2010 Standard Plan A40B). NACTO does not recommend rumble strips on roadway shoulders that are used by bicycles unless there is a minimum clear path of one foot between the rumble strip and the traveled way, 4 feet from the rumble strip to the outside edge of the paved shoulder, or 5 feet to an adjacent guardrail, curb or other obstacle. NACTO recommends other appropriate alternatives to the rumble strip are considered where conditions prevent the minimum advised clearance.

Pavement type and roadway conditions are a major consideration when planning for bicycle tourism. Smooth road surfaces foster pleasant riding experiences (Beierle, 2011). Chip seal can be a hazard, creating an unstable surface, masking potholes and other hazards, and resulting in piles of aggregate on the shoulder that force cyclists into the travel lane (Adventure Cycling Association). Chip sealed shoulders that allow enough room for a cyclist to travel comfortably on

the smoother, unsealed portion is preferable to chip sealing that covers the entire shoulder of a road edge or a chip seal line that ends in the middle of a narrow shoulder (Beierle, 2011). Cracks, potholes, and patches in the roadway or on the shoulder can cause flat tires, damage to bicycles or gear, or crashes and falls.

Adventure Cycling Association is partnering with local and state advocacy routes to ensure that safety along the route is not compromised by highway improvement projects, such as rumble strips and aggregate chip seal.

Debris in the roadway is a concern and hazard to cyclists. Cyclists try to avoid debris, such as glass, dirt, rocks, metal, tires, car parts, trash, and road kill, because they can cause crashes as well as damage to bicycles and gear. Cyclists may swerve to avoid debris, putting themselves at risk of falls or collision with motor vehicles, both of which could cause serious injury or fatality (Beierle, 2011). Regular sweeping of cycling route shoulders is advisable. This enhances riding conditions, reduces flat tires and other damage, and allows cyclists to safely navigate the shoulder of the roadway.

Heavy vehicles and recreation vehicle traffic is a concern to the safety of cyclists, especially in agricultural areas and areas with high recreation tourism traffic. Proper speed limiting is important in these areas, as well as roadway geometric design that allows sufficient space for all roadway users. Wide lanes that accommodate heavy vehicle use, as well as sufficient shoulder or bike lane space, is essential. A buffer between the two is ideal. Signage can help alert drivers to the presence of cyclists.

AASHTO's "A Policy on Geometric Design of Highways on Streets", frequently referred to as the "Green Book" provides guidance on bikeway design for rural arterials. Standards state that "all roads, streets and highways, except those where bicyclists are legally prohibited, should be designed and constructed under the assumption that they will be used by bicyclists" (AASHTO). The Oregon Department of Transportation cites clarification of AASHTO's guidelines from the January, 2013 MAP 21-NHS Standards Impact Meeting with FHWA, ODOT, and City and County

Agencies. Rural arterials are defined by AASHTO as having the highest level of roadway functional classification, such as interstates, freeways and expressways, and principal arterials. AASHTO requires widths of lanes and shoulders as related to traffic volume, design speed, and average daily traffic (ADT). A standard truck measures 10.5 feet wide, mirror to mirror. Where large commercial vehicles are present and in large numbers and traveling in opposite directions on two-lane, rural highways, 12-foot traffic lanes are desirable, especially in conjunction with usable shoulders that are between 4 and 7 feet wide (AASHTO, 2013).

AASHTO acknowledges that rural highways are used by touring bicyclists for recreation and travel. Historically, AASHTO has acknowledged lane width as the most crucial component of bicyclist safety, and recommends adding or improving paved shoulders as the best way to accommodate bicyclists in rural areas while also maintaining level of service for vehicles. Paved shoulders should be at least 4 feet wide for maximum safety, and wider in the case of higher vehicle speeds or a predominance of trucks and recreational vehicles. However, AASHTO further states that any shoulder at all is better than none. Pavement in shoulder areas should be smooth, free of cracks, joints, drop-offs, holes, or obstructive utility covers. Further recommended are bicycle-safe drainage grates, bridge expansion joints, and railroad crossings, as well as smooth pavements, adequate sight distances, and signal timing and detector systems that respond to bicycles.

## **Economic Benefits of Bicycles, Infrastructure and Tourism**

### *Bicycles*

While it has long been thought that automobile travelers are the greatest contributors to the economic vitality of local downtowns and the biggest spenders at restaurants and retail establishments, current studies indicate that this assumption is no longer valid. Detailed surveys conducted in Portland, Oregon, and confirmed in various other cities and downtown areas, show with increasing resolution that cyclists contribute dramatically to economic revenues of eating,



drinking, and retail establishments (Clifton, 2012). Areas are broken down to central business district, urban core (the central city outside the CBD), neighborhood centers, and low-density suburban business districts. Establishments surveyed include a wide variety, ranging from high turnover restaurants, convenience stores, and bars to high-end establishments and grocery stores. Customers arriving by car spend the most per visit across all establishments, but cyclists spend the most per month. While cyclists spend less per visit at grocery and retail stores, they visit more frequently, amounting to an equivalent, or greater, overall spending. Cyclists spend cumulatively more money at bars, restaurants and convenience stores than do customers who arrive by car.

### *Trails & Greenways*

The evidence supporting the conclusion that trails and greenways improve local economies continues to grow. Across the country, trails and greenways are stimulating tourism, recreation-related spending and the housing market. Trail and greenway systems have become the central focus of tourist activities in some communities and an effective force for kick-starting a stagnating economy. Trails can have compounding benefits on economic development, including benefits to travelers, local residents, and the city and region at large.

As more travelers become increasingly interested in tourism and sightseeing activities that include physical activity and exercise, trails are a growing attraction for people visiting an area. Communities around the country are increasingly using trails as a tool for economic revitalization. This model places trails as a centerpiece of a tourism-centered strategy for small town revitalization. Well-connected trails between downtown businesses have demonstrated the ability to generate revenue and attract visitors. These visitors come from both near and far and have the potential to substantially stimulate the economy, especially in sectors such as restaurants, local stores, and lodging.

As an infrastructure amenity, trails also have benefits for locals. They contribute to quality of life by preserving open space, and foster a sense of community by providing a public space where people can socialize and interact. They function as a nearby area for exercise, proximal to neighborhoods and connecting residential areas. With proper planning and connection to a mix of land uses, trails can be a strong asset by providing transportation options to locals as well as visitors. They may function as a means of commuting to work or school, and as a safe alternate route to recreation, shopping, or downtown areas.

On a city or regional level, studies show now more than ever that trails increase property values and subsequent property tax revenues. A 1998 study in Brown County, Wisconsin, found that lots adjacent to the Mountain Bay Trail sold faster and for an average of 9 percent more than similar property not located next to the Trail. The *Consumer's Survey on Smart Choices for Home Buyers* finds that trails ranked the second most important amenity out of a list of 18 choices (Wisconsin DOT). More recently, the New York Times cited a National Association of Homebuilders study finding that trails are the number one amenity cited by homeowners when they choose a new community (Rails to Trails).

Marion County, Indiana, found that the overall impact of trails on property values was estimated over \$140 million (Lindsey, et al., 2003). The economic impact of a single trail corridor in Austin, Texas was \$13.4 million in property tax revenues (Nicholls, et al., 2005). The conclusion that the existence of trails generates increased revenue through higher property values is of mounting importance as the public becomes increasingly aware of the health necessity of daily exercise and active transport.

Trails enhance communities and regions with more than increased housing prices. They contribute to conservation of open space, an important goal in the General Plan of most communities. They reduce vehicle miles traveled (VMT), and subsequent pollution, GHG emissions, noise, and congestion, by providing connections within and between communities that support active transportation and multi-modal travel. They can stimulate local business by enhancing connectivity between residential and commercial areas, encouraging greater travel

through downtown areas, and connecting commercial areas with one another. A study of users of the Fox River Trail showed 39 percent of responding businesses indicated increased business as a result of the Fox River Trail (Runge, 2002).

A recent planning movement called “Trail-Oriented Development” or “TrOD” (an obvious offshoot of the Transit-Oriented Development movement “TOD”) is an emerging planning tool that combines active transportation benefits of a trail with the revitalization potential associated with well-designed and well-managed urban parks to create more livable communities. Transit-oriented development has a proven track record of economic success. With the aim of building places where people can live, shop, and travel from a string of centralized community centers with a mix of uses, TODs have a positive impact on housing values adjacent to transit stations. The discrepancy between prices near and far from transit ranges from 6.4 percent in Philadelphia, to 17 percent in Chicago, to 45 percent in Santa Clara County (Cervero et al, 2004). TrODs, in a similar way, increase the value of adjacent housing stock. Even when the increase is slight, the linear nature of trails and greenways allow many parcels to be affected by their presence, resulting in a significant total effect. Linear green spaces maximize the total number of properties that can be positioned adjacent or nearby.

When the development of trails is accompanied by appropriate land use planning and zoning changes, they have the potential to be a major driver for economic development and downtown revitalization. Good planning, such as zoning changes, tax incentives, and city investments in public space improvements, are key factors in begetting positive development along the trail corridor.

### *Bicycle Tourists*

Bicycle tourists, a growing, affluent segment of the tourist market, contribute significantly to local businesses that are well connected to trails. Along the Virginia Creeper Trail in southwest

Virginia, visitors spend \$1.59 million annually providing an estimated 27 new full time jobs (Rails to Trails Conservancy).

A case study of the bicycle facilities in North Carolina's northern Outer Banks found that "the annual economic impact of cyclists is almost nine times as much as the one-time expenditure of public funds to construct special bicycle facilities in the region and had a positive impact on respondents' vacation planning, with 43 percent reporting that bicycling was an important factor in their decision to come to the area, 53 percent reported bicycling as a strong influence in their decision to return in the future, and 12 percent reported staying 3-4 days longer to bicycle in the area" (Judson, Guenther, Cook and Meletiou, 2004).

### **Economic Development via Tourism**

Tourism can be an advantageous means of stimulating a local economy by drawing new visitors and through the sale of food, beverages, lodging, and souvenirs. Care must be taken, however, to balance economic benefit with environmental preservation. Nature tourism is considered by many governments to be an economic and conservation strategy combined. When properly planned, monitored, and managed, this can be the case. It is important to plan and manage ecotourism in a way that is worthwhile, while not exploiting the surrounding local environment. Because ecotourism draws much of its income from the state of the environment, it will greatly benefit when it is run in a sustainable manner. Striking a balance between ecology and economics is crucial in order to prevent ecotourism, with its increasing popularity, from following the form of mass tourism's tendency toward overconsumption, environmental degradation, and site disrepair.

Tourist transportation is responsible for a large portion of negative externalities of the tourism industry. Movement of tourists to, from, and within a site may cause a lot of impacts in terms of pollution, noise, and diminished environmental quality, especially over the long term and as tourist numbers rise. Bicycle tourism eliminates the need for some concern on this matter,

however it will still be important to consider other modes of transit employed by cycle tourists when they are not traveling by bicycle, as well as the impacts of increased motor vehicle tourism on bicyclist safety and comfort. Other concerns of note include overcrowding, natural resource allocation, and ecosystem preservation. These issues become more crucial as tourist destinations become established, visitors rise in numbers, and surrounding areas begin to generate increased income from touristic offerings. Established standards, benchmarks, capacities, plans, and management strategies will be necessary in maintaining an acceptable balance.

### **Tourism Planning**

Two types of tourists were identified by Holden in his classic 2000 study: those who are nervous, self inhibited, and non-adventurous who prefer a high level of tourism development, and those who are confident, experimental and adventurous and prefer non-institutionalized tourism. In another classic study, Duffus and Dearden (1990) also theorized that tourists come in two different categories: specialists, who require little infrastructure, desire physical rigor and have a high interest level in the area; and generalists, who are less ambitious, not particularly interested in the site's attraction, rely heavily on infrastructure and usually come in large numbers.

Tourism planning is goal-oriented, striving to achieve certain objectives by matching available resources and programs with the needs and wants of people. Comprehensive planning requires a systematic approach, usually involving a series of steps. The process is best viewed as an iterative and ongoing one, with each step subject to modification and refinement at any stage of the planning process.

The six steps in the tourism planning process include:

1. Define goals and objectives.
2. Identify the tourism system.
  - a) Resources

b) Organizations

c) Markets

3. Generate alternatives.
4. Evaluate alternatives.
5. Select and implement.
6. Monitor and evaluate.

In the past, tourism has been considered a sector of easy development and without requiring a lot in terms of planning. However, as more experience is gained in the sector, experts have found that the absence of adequate planning leads to negative impacts on the tourist destination. The World Commission on Environment and Development (WCED) stated in their 1987 Brundtland report: "Tourist activities are sustainable when they are developed in such a way to sustain themselves vital in a tourist area for boundless once, they don't alter the environment (natural, social and artistic) and they don't hinder or inhibit the development of other social and economic activities." The World Tourism Organization (WTO) defines sustainable tourism as "a form of development that satisfies the actual demands of tourists, and of the host communities, protecting at the same time resources and creating opportunity for the future. Sustainable tourism implicates such a management of all the resources to satisfy the economic, social and aesthetics demands, contemporarily preserving cultural integrity, the essential ecological trials, the biological difference and the systems of support to the life."

The tourism industry requires a multitude of supporting goods, services and infrastructure. It consumes resources and creates waste, and also has the tendency to overconsume (Journal of Sustainable Tourism). Tourist areas under stress experience a range of social, cultural and environmental impacts that can be linked to the overuse of the resource base. Primary resources are consumed (water, energy, etc.), ecosystems can be modified, harmed or destroyed, aesthetics and views can be impaired, and ground and water can be polluted. Historical and cultural heritage can suffer from over visitation and overuse, resulting in degradation and

deterioration of historical, cultural, or religious sites, statues, or structures. Transportation in tourism produces air and noise pollution. Construction of resorts and hotels can cause pollution as well as obstruction of access or views to public spaces or natural resources. These can be exhibited in host communities by increased traffic flow and congestion, rising land prices, urban sprawl, and widespread changes in the social structure. Economically, the problem of the “tourist single-culture” is important. An economy based on tourism alone brings risks and lacks the stability associated with a diversity of economies. In this case, external factors such as economic recession, natural disasters, or terrorist threats that have a negative effect on tourism can collapse the economy of the region.

Careful planning is essential to ensure that tourism provides a high quality experience for the tourist, adds value to the existing host community, provides non-harmful means of transportation and amenities for visitors, and enhances natural resources rather than depleting them. Anselmi and Genna state that the most successful tourist destinations depend upon clean physical surroundings, protected environments, and the distinctive cultural patterns of local communities. They deem it necessary to consider the tourist destination in a global sense, within the context of a holistic vision, and with the perspective of a local system of touristic offerings.

### **Agritourism**

Agricultural tourism is defined by the University of California Small Farm Program as a “commercial enterprise at a working farm, ranch or agricultural plant conducted for the enjoyment or education of visitors, and that generates supplemental income for the owner” (UC Small Farm Program, 2014). Agritourism has become internationally popular. Europe, Australia and New Zealand are excellent case studies of agritourism (often termed “country hospitality” in those regions), as this type of commerce has become an important component of current leisure and travel trends in these areas (Havlíček, 2013). The European Commission, for instance, has been

very supportive of this type of economic activity because it represents small-scale, localized community development (Platania, 2014).

This type of tourism gives a traveler the opportunity to live in contact with nature, learn about and appreciate local products (Chinnici et al., 2014), and learn about rural culture. It additionally allows the agricultural entrepreneur to diversify their income. Additionally, agriculture contributes to the acclaimed concept of agriculture multifunctionality (Platania, 2014). Multifunctionality in agriculture refers to the additional benefits of agriculture outside of benefits from trade. These can include environmental protection, landscape preservation, rural employment, food security, and positive externalities in the form of public goods (OECD). These benefits are more broadly classified as benefits to society, culture, national economy, and national security (WTO). Agricultural systems supply jobs for rural people, add to the viability rural areas, build a more stable food supply, and protect open spaces and undeveloped lands in addition to providing food and agricultural products (OECD).

A key factor in the development and increasing success of the agritourism industry is the growing interest of city inhabitants in where food comes from and how it is produced. The farm-to-table movement has become popular in urban areas, along with a return to principles and ideals of permaculture, upcycling and sustainability.

The living standard of rural people in many countries of the world is very low. Economic research has indicated a considerable number of people living in rurally populous counties are not able to earn a living wage from agricultural production of plants and animals. In this instance, it is beneficial to supplement income with non-farming sources. This stabilizes the food system and agricultural economy by offering farmers an alternate income that can support their food production when the margin of benefit becomes thin. Agritourism is one method of supplementing the income of farmers to allow them to continue working in their field, maintaining the integrity of the local food system, and educating the population on the origin and production of food.



## **Tourism Marketing**

Decision-making amongst consumers of touristic activities is relying more and more frequently on the basis of information collected via the internet. The internet is a place where the potential consumer can compare alternatives and make responsible choices (Wan, 2002), and the platform by which touristic products are increasingly purchased (Platania, 2014). It has led to a competitive environment in the tourism industry, has become a major avenue for distribution of touristic services, and a tool for competition and tourism development.

Doolin, Burgess and Cooper conducted a 2002 New Zealand case study evaluating the use of the internet for tourism marketing. This study uses an eMICA model (extended Model of Internet Commerce Adoption) that was originally developed by Burgess and Cooper in 2000. The model consists of three stages, incorporating three levels of business process. The first is web-based promotion providing basic information such as name, address, contact information, email contact, and information on company activities. The second stage may contain a range of interactivity, and contain features such as a product catalogue, links to further information, customer support, newsletter signup, and discussion forums. The third stage includes provision secure online transactions. Each stage provides added value through information management and rich functionality.

This study evaluated all 26 of New Zealand's RTOs websites. RTOs are geographically based destination marketing organizations that act as a layer between the central government and the local tourism industry, providing a coordinated marketing effort and acting as a portal for visitors to access tourism operators and service providers. Each website was examined in detail and the various functions of each site were noted in a spreadsheet. The functions and features of all sites were grouped according to their level of interactivity and sophistication, resulting in 14 levels of functionality, from basic to full electronic commerce. Data analysis was cross-referenced with data from 188 Australian RTOs, and consistency was found between the two data sets.

Analysis of the study indicates features of tourism websites that best contribute to the value, usefulness, and subsequent success of the website. The features of note that added the most value are listed below, in order of increasing value added and increasing interactivity.

- Basic contact information
- Navigation buttons to different parts of the site
- External links to further information
- Key facts on items such as location, climate, weather, and services
- Maps
- Itineraries
- News and media releases for the region
- Photo gallery
- Currency converters
- Web-based contact form
- Information on accommodation, attractions, activities and events in the region, sometimes organized by category or with links to the third-party operator
- Electronic postcards
- Interactive maps
- Downloadable materials
- Special offers
- Guest books
- Webcams
- Online customer support
- FAQ section
- Internal search engine
- Web-based inquiry or order forms
- Searchable databases by type and/or location within the region with information on accommodation, attractions, activities, dining, shopping, and events

- Online bookings for accommodation, tours, and travel
- Payment processing for bookings
- Multi-language support
- Multimedia
- Newsletter updates by email
- Streaming video
- Virtual tour

In summary, this study suggests that the major milestones of developing an effective website for tourism industry services include moving beyond a basic webpage with only contact information to providing links to value-added tourism information and the use of web-based forms for customer interaction. Offering opportunities for the consumer to interact with the website through value-added features such as sending electronic postcards or recording their experiences and reading others' experiences in web-based guest books, and the provision of online customer support with internal site search engines and searchable databases. Internet commerce transactions, acceptance of online bookings for tourism accommodations, and secure payment options are the final milestone for internet commerce in the tourism industry.

Platania repeated this study in 2014, focusing specifically on agritourism marketing via internet. The way in which tourists choose farms follow the prevailing trends of the tourism sector (Platania, 2014), and the decision making of agritourists is based on information they collect via the internet. Therefore, farms that wish to engage in agritourism activity must establish a website that is effective. Effective web pages, particularly for farms, must communicate the local identity and the specific nature that provide the competitive advantage of the farm. This communication must not only distribute information on the natural resources available at the site, but also create a virtual experience or image for the potential consumer.

Due to the increasing importance of the website in agritourism success, Platania has conducted an evaluation of websites of Sicilian farmhouses through an exploratory survey collecting data on

the characteristics of different farm's websites. The study included a sample size large enough to be considered representative and defined 54 variables, some typical of the eMICA model and some specific to the agritourism sector. The study analyzed the complexity of farm's websites where commercial transactions take place, ranging from "static" websites (giving only simple descriptions and information) to "dynamic" or "integrated" websites (offering services and interactive information). Multivariate and cluster analysis are used to evaluate a range of informational offerings on the websites of these farms.

The study concludes that farms must create a website that ensures their competitive position with regard to online tourism if they are going to have success in the agritourism market. A website is a strategic necessity, and a static "brochure site", containing only basic information, is not competitive in the long term. Connection to social media, such as Facebook, Instagram, Tripadvisor, or Yelp, is a strong addition to a site but not effective as a substitute. The concept of painting a visual or experiential image for potential visitors is a must, utilizing resources listed below.

- News
- Links to the surrounding territory
- Media gallery
- 360° panoramic images
- Multiple language capabilities
- Information about the farm, building, rooms, prices, history
- Information on additional services, other nearby attractions, local restaurants, history, and culture
- Group purchase deals
- Cooking recipes
- Quality marks issued by the regional government
- Quality labels issued by tourism associations

## **Wayfinding**

Wayfinding is an important infrastructure element to be considered in conjunction with planning for tourism and bicycle improvements. The University of Michigan defines wayfinding as “spatial problem solving.” Explained further, this means knowing where you are in an environment, knowing where your desired endpoint is, and knowing how to get there from your present location. Wayfinding is important because it dictates the experience of the user, either as a positive experience that makes them likely to return, or as a negative or frustrating experience where they may be unlikely to return. Signage is an important component of wayfinding (University of Michigan, 2002).

The Netherlands have done a particularly stellar job at providing wayfinding for cyclists, pedestrians and in train stations. Directional signs for the public give direction to destinations including neighborhoods, villages, towns and cities of varying distances, railway stations, park-and-ride locations, bike parking facilities, exhibition halls and hospitals. The signs are modular for ease of modification, standardized across cities, towns, train stations and more for ease of user recognition. They employ the use of symbols and pictograms to provide memory cues, and also provide small captions to aide first users and older travelers, who may have limited experience in the use of symbols. The signs are applied universally, everywhere from very small regional train stops to large and complex city transportation hubs (Mijksenaar, 2014).

## **Metrics for Measuring Bicycle Tourism**

With the implementation of a new bicycle tourism plan, just as with any new plan or transportation improvement, comes a need and desire to measure its outcome and effectiveness over time. Identifying metrics for measurement are a key first step in this process. Metrics are performance measures that represent, in quantitative or qualitative terms, the extend that to which a function is

executed. Performance measures for transportation projects may measure the effectiveness of the project from the viewpoints of the user, the owner or operator, or other stakeholders (Sinha and Labi, 2011). Performance measures should be evaluated at various stages of the implementation of the transportation project in order to inform decision-making, evaluate progress and quantify effectiveness. An established method of evaluating metrics may also be useful if funding for such type projects becomes available, as many transportation-funding sources require quantification of benefits for dispersal.

Metrics for measuring bicycle tourism may include:

- Bicycle counts on local roads
- Bicycle counts at nearby tourism destinations, such as farms, restaurants, hotels, campgrounds, recreational areas
- TOT tax revenue from cyclists
- Other revenues from cyclists
- Visits and tune-ups at local bike shops
- Gross sales of local bike shops
- A database or guestbook kept by the Visitor's Bureau, a bike shop, or individual hotels
- Number of miles of maintained bike lanes, bikeways, and bike routes
- In the case of a bicycle rental or borrowing program, number of bicycle rentals per month or year

## **Background Case Studies**

### *Solvang*

Solvang is a small Danish town located in Santa Barbara County, just off of Highway 101. The city was founded by a group of Danes and is now the home to Danish bakeries, restaurants, merchants, traditional half-timbered architecture, Danish churches, and windmills, offering a taste

of Denmark in California. It offers attractions such as Danish music and folk dancing, a replica of a 19<sup>th</sup>-century horse-drawn Danish streetcar, and traditional Danish pastries and specialty items. An additional attraction is its 700-seat open-air Festival Theatre, built in the 1970s in Danish and Elizabethan architecture, producing musicals such as *West Side Story* and *Les Miserables*. Local museums offer additional appeal. The Elverhøj Museum, housed in a historic residence, features Danish heritage, artifacts, diorama models of Solvang in the 1920s, and a seasonal photography exhibit of the Solvang Village. The Hans Christian Anderson Museum is devoted to the author's life and works. The Vintage Motorcycle Museum displays a private collection of vintage and rare motorcycles of varying types. The Wildling Museum portrays wilderness natural heritage through art, education and field experiences. The outskirts of the Solvang area are home to many wineries and tasting rooms.

Annual events include "Danish Days" every September, including music, dancing, parades with floats, marching bands, folk singers and dancers, and eating competitions. Solvang is a featured stop on the annual professional cycling stage race "Tour of California," and is also home to two annual amateur cycling events, the Solvang Century and Half Century in March and the Solvang Prelude in November. Solvang participates in the Santa Ynez Valley Craft Beer Month, occurring every May and spread throughout venues across the region in Buellton, Los Alamos, Los Olivos, and Santa Ynez.

Cycling is featured as a prominent activity in Solvang and the surrounding areas. The flat, rolling terrain, nearby country roads, wineries, breweries, and existing attractions for tourists of all types contribute to Solvang as an ideal cycling area. Cycling is featured as an activity on the Visitor's Bureau website, listing several self-guided rides in the area and providing detailed street directions to guide visitors. An easy family ride sticks to bike paths and lanes, contains options for varied distances, stops for picnicking and sightseeing, and features windmills and miniature horses. Moderate and difficult rides are also featured, described in terms of scenery, distance, elevation change, and en-route attractions. One ride tours locations from the movie "Sideways," offering a bicycle wine tour and urging riders to ride safely. These ride routes are generated in-

house by the visitors bureau, as well as adopted from the Santa Barbara Bicycle Coalition, Santa Barbara Outdoors, and local experts. Solvang is home to Dr. J's Bicycle shop, which offers maps, rents bicycles, performs repairs, and hosts the Century and Half Century annual rides as well as weekly group rides.

Solvang is a well-established tourism destination due to traditional, cultural, and unique amenities. The town has successfully marketed its unique character to draw international and local tourists. It is located on the route of many bicycle touring and bus touring companies. It is well established as a tourist destination and stopping point for independent travelers. The town maintains a comprehensive and organized visitor website, complete with attractions, amenities, and upcoming events. The visitor's bureau offers very kind and helpful advice via phone.

### *Fort Bragg*

Fort Bragg is a small town on California's North Coast. It is similar to Winters in its historic, quaint character and touristic draw. Hundreds of bicycle tourists pass through Fort Bragg each year as part of their journey along Highway 1. Fort Bragg offers several motels and campgrounds located just off of the Highway, two local bike repair shops (Fort Bragg Cyclery and Mendocino Bike Sprite), and a variety of natural cafes, restaurants and coffee shops. Both are located on the Highway 1/main street and offer bicycle repair services, parts and supplies. There are several bicycle groups in Fort Bragg. The Mendocino Bike Sprite offers guided tours for every skill level. Mendocino Coast Cyclists is an all-ages group that schedules weekly rides for all levels and are open to members and visitors. The SOBs (Seniors on Bikes) is an affiliate group that gathers every day at 10am for a 10-mile ride, followed by coffee, cookies, and lunch.

Fort Bragg has a comprehensive bicycle plan to guide the future of its cycling infrastructure. The city considers itself a great place to bike. It has few constraints to bicycling: the weather is mild, and the city is flat and compact. The relatively short distances between residential areas, schools, parks, and commercial centers mean that fifty-seven percent of bicycle trips are less than two



miles in length – a perfect target length for trips made by bicycle instead of auto. Bicycling offers many benefits to the residents and visitors to Fort Bragg including efficient and sustainable transportation, improved public health, equity, and improved quality of life.

Opportunities and constraints are similar to those in Winters. The bicycle plan acknowledges the opportunity presented by the Pacific Coast Bike Route as an important scenic tourism amenity for touring cyclists passing through the city. Fort Bragg is an important stopover location for touring cyclists to stay and re-supply, which generates revenue. The surrounding environment provides premier routes for experienced and recreational road and off-road cyclists. Constraints include adjacent roadways that are major thoroughfares for high-speed motor vehicle traffic at high volumes, not conducive to comfortable cycling. This, combined with minimal bicycle infrastructure, makes the corridor uncomfortable for cycling. Uneven street surfaces caused by railroad tracks, utility covers, drainage grates, rough pavement, and debris are hazardous to bicyclists.

One group of German bicycle tourists passing through Fort Bragg started in Dubai and were traveling the world with a near term destination of Big Sur. The guest book at the local bicycle shop shows that at least 50 bicycle tourists on significant west coast journeys passed through Fort Bragg between July 1 and August 8, 2009. The guest book shows that hundreds of bike tourists pass through Fort Bragg annually.

#### *State of Montana*

The small town of Ovando, Montana sits on the intersection of two established bike routes, the Great Divide Mountain Bike Route (GDMBR) and the Lewis & Clark Bicycle Trail. Ovando has embraced the roughly 400 cyclists who travel through their town annually. Townspeople noticed the traveling cyclist community, originally in the area for the former Great Divide Race, and began adding services specifically to support these travelers. Amenities have, over time, grown to include a camping area, indoor sleeping accommodations, a porta-potty, solar shower and a

whiteboard to share messages with fellow bicycle travelers. The Blackfoot Angler, a rustic fly shop, has expanded its inventory to provide limited bike parts and camping supplies. While the stock of bicycle parts didn't sell very fast for the first few years, sales are increasing as the town becomes more established as a cycling hub. The associated Blackfoot Mercantile Store has snacks, groceries and offers free cups of coffee in the mornings for traveling cyclists. Two local cafes and diners serve breakfast, lunch, dinner and beverages. There is a plan in place to add a laundromat as well. Indoor sleeping accommodations are creative, including a teepee, a freestanding shepherd's wagon, and the restored old jail.

The nearby town of Twin Bridges, Montana developed a cyclists-only campground in 2009. This small, rural town with population 400 derived great benefit from opening the campground, even though Town Council was originally skeptical of the concept. The campground hosted 250 overnight cycling guests the first summer of operation, generating an estimated total revenue of over \$10,000 to the local economy. Payment for the campground itself operated on a donation system and donations ranged from \$.76 to \$100. The campground was operated by local political champion Bill White, who reported that cyclists were exceptionally clean and courteous guests (Adventure Cycling Association).

**Table 3: Key Lessons of Literature Review**

Bicycle Tourism	Bicycle tourism is growing in demand and popularity, all over the world. Tourists are likely to desire physical activity and exercise while traveling. Bicycles and bicycle events are becoming popular.
Bicycle Tourists	Different types of bicycle tourists have different desires. Some prefer to camp and spend little money on tour, while others prefer hotels or bed & breakfasts and have a larger budget. They ride varying distances with varying intensity levels.
Bicycle Security	Bicycle tourists require a secure place to store their bicycles. Many prefer to bring their bicycles into their hotel rooms as opposed to locking them outside.
Cyclist Safety	Cyclists are safest when separated from vehicle traffic. Shoulders and bike lanes are ideal on cycling routes; even more desirable are separated Class I bike paths. Rumble strips are a hazard to cyclist safety and should be avoided on roads where cyclists are present. Shoulders, bike lanes, and bike paths should be swept and maintained, and kept free of pavement failures, cracks, debris, divots, glass, and organic material. Shoulders and bikeways should be paved with a smooth paving material for cyclist comfort.
Roadway Design	Traffic lanes should be 12' wide, especially in rural areas with high volumes of heavy vehicles. Shoulders and bike lanes should be between 4 and 7 feet wide.
Economic Benefits	Cyclists spend just as much money as driving customers (if not more) at restaurants, bars, and downtown commercial areas. Cycling and bicycle infrastructure can stimulate the local economy by enhancing connectivity to local establishments. Trails and bikeways are further known to increase the value of adjacent residential properties. "Trail-Oriented Development" is a recent planning phenomenon, in which residential areas are planned in conjunction and proximity to trails with the goal of livable, active communities.
Agritourism	Agritourism involves bringing visitors to a farm or ranch. This can include berry picking, pumpkin patches, wine tasting, cheese making, harvest festivals, or even overnight stays. This practice has multiple benefits, bringing supplementary income to farmers outside the benefits from trade, stabilizing the local food system, preserving agricultural lands, and educating the visitor on the benefits and processes of agriculture.
Tourism Marketing	Tourists are increasingly likely to do travel research and make bookings online. Successful tourism and agritourism operations must have a website. Successful websites may have photographs, listings of touristic offerings, key facts, pricing, contact info, promotions, guest book, videos, and more.
Wayfinding	Wayfinding is an important component of travel and bicycle planning. Effective wayfinding, in the form of signage and maps, improves user experience, provides an easeful navigation experience, and makes users more likely to return. Modular signage provides easier

	modification, standardized signage throughout a region enhances user recognition, and use of symbols may be efficient and user-friendly.
Performance Metrics	Performance metrics are a method of collecting data on the effectiveness of a transportation project from the viewpoint of the user, the owner/operator, or other stakeholders. Metrics are valuable in guiding future decision making because they quantify the outcomes of implementation of a new plan, transportation improvement, or tourism amenity.
Bicycle Friendly Communities	The League of American Bicyclists offers a program in which cities, states, business and universities may apply for consideration to be listed as a "Bicycle Friendly Community." This is an effective method for entities to make a name for themselves as a bicycling destination and to receive guidance and support in future bicycle planning.

### **III. PRIMARY CASE STUDY: WINTERS**

#### **Background**

Winters is a small, picturesque and vibrant city located in west Yolo County, California.

Established in 1875 and incorporated in 1898, the downtown historic district is on the National Register of Historic Places. With 19<sup>th</sup> century buildings lining Main Street and Railroad Avenue, the feeling is historic and endearing, with a sophisticated edge of artisan community, galleries, shops, wine tasting rooms, restaurants and live music venues. The surrounding area is rural and agricultural, and occupies land between the Sacramento and the San Francisco areas.

Agriculture continues to remain the central core of the community, with the surrounding region focusing on vineyards, sunflowers, walnuts, almonds, apricots, peaches, tomatoes, olives, wheat, and more. The local Mariani Nut Company is the world's largest independent nut processor. The town is ideally located on the increasingly popular I-505 corridor that links I-5 and I-80. Winters location designates the city as a gateway to Lake Berryessa and Napa Valley, and an easy stop-off en route to Cache Creek Casino Resort. Stebbins Cold Canyon and Cache Creek Regional Park are two popular outdoor areas and hiking destinations. Sonoma and Napa wine country is only 35 miles to the west on Highway 128. Yosemite National Park, Lake Tahoe, and the California Redwoods are within several hours driving distance.

Winters is home to just under 7,000 people. The town is comprised mainly of families, with 78 percent of households constituting family households and 39 percent housing children under 18 years old. The median age in Winters is 34 years old. Thirty percent of the town's population is under age 19, and 16 percent of the population is over age 60. The town's population is comprised mostly of Hispanic (52 percent), white (44 percent), and mixed race (2 percent) residents. Asian, African American, Native American, and Pacific Islander constitute the remaining 2 percent of the population. The main sectors of employment in the city are educational services, health care, transportation and warehousing, retail trade, construction, manufacturing, and agriculture.

Winters Joint Unified School District serves about 1,500 students in the city of Winters and surrounding unincorporated areas of Solano and Yolo counties. The District operates a state preschool program, Waggoner Elementary School (K-3) Shirley Rominger Intermediate School (4-5), Winters Middle School (6-8), and Wolfskill Continuation High School. Nearby higher educational institutions include UC Davis and Solano Community College's newest campus.

The City of Winters has recently developed a strategic plan aimed at maintaining and encouraging business development in emerging industries and technology. The plan utilizes several means to accomplish this vision, including a staff dedication to collaboration, problem solving, and forward motion; business incentives; and a Community Development Agency for redevelopment programs and lease assistance.

The Chamber of Commerce is active in supporting economic development to encourage a thriving and vibrant business environment. The Chamber is networked with neighboring cities, rural areas, home based businesses, and a variety of downtown businesses for optimal strength and success. It works with the Yolo County Visitors Bureau, and additionally serves as the Winters Visitors Center concierge desk. The Chamber has a monthly page in the local newspaper, informing the community of current ongoings, as well as hosts "Monthly Mixers" at various locations.

### **Tourism in Winters**

Tourism is currently a significant economic industry in the town of Winters. The aesthetic, historical, and gastronomic attributes of the town support and contribute to its touristic draw. The Chamber of Commerce and Visitors Center take an active role in attracting visitors. The visitor center offers a very well maintained, user friendly website offering history, photos, a calendar of events, relevant news articles, and a complete listing of attractions, restaurants and lodgings. A brochure recently published on the Discover Winters website poses Winters as an alternative wine tasting destination for Sacramento and Bay Area residents, nicely outlining all that the town

has to offer to visitors. An inventory of tourism-related establishments is also included in a subsequent section of this plan, listing eateries, lodging, and storefronts.

Berryessa Snow Mountain (BSM), adjacent to the town of Winters, is currently under consideration for a National Monument designation. This change would have significant economic benefits for the surrounding area, according to a study by Economic & Planning Systems, Inc, which analyzes the current and potential future regional economic impact of nature-based recreation within the proposed National Monument. The increase in visitation to the Berryessa Snow Mountain National Monument is estimated at 20 – 30 percent annually, having a cumulative impact of up to \$50 million in local economic activity and \$800,000 in tax revenue for local communities over a five-year period. The Berryessa Snow Mountain Region stretches from Putah Creek below Lake Berryessa across Cache Creek and north to Snow Mountain. The area includes 350,000 acres of national public lands.

The proposed BSM area currently supports a variety of outdoor recreational activities, including hiking, backpacking, camping, hunting and fishing, rafting and boating, off-road vehicle use on designated routes, wildlife viewing, bicycling, horseback riding, and more. The current recreational activity within the proposed National Monument site generates about \$55 million annually and \$900,000 in sales and lodging tax in nearby local communities, with 75 percent of this revenue attributed to non-local visitors. The economic impact study states that the primary economic impact will come from an increase in visitation. Academic and professional studies have consistently documented higher visitation levels and increased economic activity as a result of designation of public lands to park or monument status (Headwaters Economics).

This influx in tourism to the area due to National Monument designation would have clear impacts on the tourism industry in Winters. Increased visitation of 20 – 30 percent annually would increase demand for touristic accommodation such as lodging, food, entertainment, fuel, and transport. Berryessa Snow Mountain's existing focus on outdoor recreation aligns with a proposal for stimulating bicycle tourism.

The designation of the Berryessa Snow Mountain area will come with management planning and tourism marketing, prepared jointly by federal resource managers and other active stakeholders. This will bring an opportunity for surrounding areas to concurrently develop their own planning and marketing that is consistent with and complementary to the planning and marketing of BSM. This agglomeration of tourism planning, marketing, and offerings, if done in a consistent and complementary way, has the potential to increase total economic revenues from the baseline estimates. Winters is prominently noted in the economic impact report as a “gateway community” to BSM access points, and highlighted in the report to likely enjoy the most significant increase in direct visitor expenditures. According to the economic impact report, private investment, such as new retail offerings or expanded lodging options, makes the difference between the low estimate for economic increase (120 new jobs, \$33.2 million in expenditure, \$538,000 in tax revenue) and the high estimate (180 new jobs, \$49.8 million in expenditure, \$807,000 in tax revenue) over the initial five-year period alone. For this reason, careful tourism planning on the part of local government agencies, businesses, and stakeholders will be necessary and beneficial.

### **Inventory of Tourism Amenities, Attractions, Events, and Bike Rides**

Winters and the surrounding area currently host a variety of quality local eateries, attractions, amenities, and points of interest that contribute to its desirability and strength as a tourism destination.

#### *Restaurants and Cafes*

**Putah Creek Café** features breakfast, lunch, coffee, espresso, baked goods and a wood burning pizza oven. It is located on Main Street in the heart of Historic Downtown Winters.

**Preserve Public House** is a restaurant and bar located downtown across from the Community Center. It features a variety of artisan lunch and dinner items, a selection of local and regional draft beers, and a bottle shop for take-home purchases.



**Steady Eddy's** is a unique coffee house serving breakfast, sandwiches, salads, wraps, and soups. It features local art and an open mic event in a casual setting.

**Buckhorn Steakhouse** is located in the historic DeVilbiss Hotel on Main Street. It is known for its high-end steaks, served in a variety of cuts and preparations, and other hearty meat and dinner dishes. It is distinguished by its casual roadhouse appeal and Buckhorn bar.

**Ficelle** serves lunch, tapas, salads, desserts, wine and beer on Main Street.

**El Verduzco Taco Truck** is Winters' famous taco truck, serving tacos and burritos. It has been spotted most often at Grant Avenue & Railroad Avenue.

**Tomats California Cuisine** located on W. Grant Avenue offers quality classic American cuisine, desserts, and a famous Sunday champagne brunch.

**Ocean Restaurant** on Main Street serves friendly Chinese food for lunch and dinner at a good bargain.

**El Pueblo Meat Market and Taqueria** serves breakfast, lunch and dinners seven days a week. They offer a deli, food to go, a salsa bar, homemade tortillas, ceviche, tacos, as well as marinated meats, seafood and produce. The family owned establishment is friendly and gets great reviews from visitors.

**Chuy's Taqueria** features traditional Mexican food and offers a panaderia next door with baked goods, ice cream and juices.

**The Scoop** frozen yogurt shop serves self-serve, pay-by-weight frozen yogurt next to the Palms Playhouse downtown.

#### *Beer & Wine, Etc.*

**Berryessa Brewing Co.** is located on Highway 128, just west of Winters. It is a craft brewery producing fresh quality beer available for wholesale or to enjoy at the taproom. Atmosphere is relaxed with indoor and outdoor seating, games, live bands and entertainment. Beer is sold in half pints, full pints, sample trays, growlers and kegs.

**Berryessa Gap Winery** is located adjacent to Berryessa Brewing Co. just outside of Winters, surrounded by the estate vines. The winery offers award winning, estate grown, local Yolo County wines.

**Berryessa Gap Tasting Room** is the downtown Winters annex to the Berryessa Gap Winery.

**Turkovich Winery** is located downtown and offers daily complementary wine & cheese tasting, as well as evening hours on the weekends. The tasting room teams with the Winters Cheese Company for cheese plates and snacks.

**Main Street Cellars** is a recent addition to the downtown community. With the motto “Juicy wine. Stinky Cheese” they pour wine tastes and serve locally sourced snacks and Sunday Brunch. The owner brings 25 years of wine experience and a passion for pairing people with wine. The establishment hosts events such as quarterly wine dinners (with four-course meals created around featured wines), wine classes, and First Friday Jazz on the patio.

**RootStock** is a tasting bar featuring local wines, local and regional art, a store offering local olive oils, balsamic vinegars, honey, and hand crafted local and imported products. The establishment also holds monthly “Cork & Canvas” art classes.

**Creekside Bar** is located on Putah Creek Road, just across the river from downtown Winters. It offers pool tables, drink specials, themed parties, djs and rock bands.

#### *Stores*

**Velo City Bicycle Center** is a full service bicycle repair shop located in downtown Winters. They carry bicycles from Innerlight, Rocky Mountain, Ventana, Scott, Ibis, and Focus, and service most makes and models of bicycles. They also offer accessories, clothing, a wide variety of services and a friendly atmosphere.

**Winters Cheese Company** is a small storefront cohabitated with Preserve Public House selling fine cheeses made in house. They make great gifts or souvenirs.

**Cloth Carousel** features a wide variety of specialty fabrics. Contemporary, traditional and retro quilts decorate the walls. An ideal place for quilters and fiber artists.

**The Clayground** is a ceramic studio where children, individuals and groups may receive lessons on hand building and wheel throwing techniques. The studio is owned and operated by two women with extensive backgrounds in painting, pottery, and art history.

#### *Lodging*

**Lake Solano Campground** is located just west of Winters. It is known as a nice refuge from busy areas of Sacramento and the Bay Area. It holds 83 campsites, some with water and electric

hookups, as well as bathrooms with sinks and hot showers and flush toilets. The park caters to boaters, campers, swimmers, and picknickers and is an ideal location for bicycling, hiking, bird watching, and wildlife viewing.

**Inn at Park Winters** is a boutique inn occupying a stately Victorian mansion. It offers beautiful gardens, gourmet dining experience with acclaimed chefs, a saltwater swimming pool, spa, sauna, fire pit, yoga, lush gardens, outdoor terraces and an expansive estate. The resort hosts weddings, retreats, and special or corporate events.

**Abbey House Inn** is a charming and restful 1905 cottage that has been restored and updated, featuring a kitchen, dining area, parlor, and wrap around porch.

**Downtown Winters Hotel and Conference Center** is a new downtown hotel, in the planning, design, and construction phases at the time of this publication. It is slated to be a full service hotel, and envisioned by the City of Winters as a catalyst project that will encourage further development in the downtown core.

#### *Attractions*

**The Palms Playhouse** is located in a 19<sup>th</sup> century Opera House downtown. It offers off-beat intimacy and an eclectic setting for world class performers and musicians. It seats 220 people and also offers a dance floor and bar. It is strolling distance from restaurants and local wine tasting rooms in Winters, and makes for a fun evening out.

**Rotary Park** is located downtown. It is home to a large historic gazebo and the Winters Community Center. It offers a large green area and relaxing benches, and backs up to the J. Robert Chapman Memorial Bridge. It hosts outdoor concerts during the month of July, put on by Winters Friends of the Library.

**J. Robert Chapman Memorial Bridge** is a refurbished steel railroad bridge crossing Putah Creek, constructed in 1906 by the Southern Pacific Railroad and since transformed into a pedestrian and bicycle path. It connects the city of Winters to the Davis region via tree-lined roads winding through orchards and agricultural lands. The bridge is named after a former mayor and council member of Winters.

**Happy Trail Loop** circles around Lake Solano and the back roads of Winters.

## *Events*

**Open Mic Night and Poetry Night** is held on the third Thursday of every month for music and fourth Thursday of every month for poetry at RootStock on Main Street from 7-9pm. Also available is wine tasting, cheeses and unique gifts for sale.

**Capay Valley Almond Festival** is held annually in February or March, when the almond trees are in bloom. The festival features food, entertainment and crafts in five neighboring towns: Rumsey, Guinda, Brooks, Capay, Esparto and Madison.

**Youth Day** has been celebrated in Winters for 81 consecutive years. It was founded in 1933 by Reverend Charles P. Barkman and the local high school principal, Dr. A.M. Heron, to teach young people the aspects of city government. Children celebrate the event by holding elections for government positions and meeting with their counterparts at City Hall. Other highlights include a parade, a pancake breakfast, a rubber ducky race in Putah Creek, as well as music, vendors, food, wine tasting, olive oil tasting, and crafts. It is celebrated the last Saturday in April.

**Winters Outdoor Quilt and Textile Art Festival** is held annually in June and shows hundreds of handmade quilts, blanketing the town, up and down the downtown streets. Cloth Carousel and the Winters Chamber of Commerce sponsor this event.

**Thursday Night Outdoor Concerts** are held during the month of July at Rotary Park downtown.

**Fireworks in Winters** on July 4<sup>th</sup> is a spectacular annual event that has persisted in tradition. While some cities have cancelled fireworks to cut costs, Winters continues to light up the sky.

**Capay Tomato Festival** takes place in July and features tomato tasting, live music, dancing, food, local beer and wine, and a picnic contest. It takes place at Farm Fresh to You/Capay Organic, off of Highway 16.

**Winters Harvest Festival** is held in October along Main Street. It brings together local producers and artisans to celebrate the fall season. The event is sponsored by the Winters Chamber of Commerce in an effort to celebrate the producers of agriculture, arts and crafts in Winters and the surrounding area. Local goods and crafts are sold and live music is featured.

**Hoes Down Harvest Festival** takes place annually in October at Full Belly Farm. Proceeds go to non-profit organizations that support sustainable agriculture and rural living. It offers camping, a bike tour of local farms, a group hike, live music, activities and shows, agricultural workshops, and specialized seminars on a variety of topics.

**New Years Eve** is celebrated with style at the Inn at Park Winters. The party includes dancing, DJs, light shows, gourmet appetizers, full bar, champagne toast, midnight buffet and dessert bar.

### *Bike Rides*

Many organized bike rides occur almost every day in Yolo County, Davis and Winters area. The Davis Bike Club hosts weekly, monthly, and sporadic rides almost every day of the week.

Adventure Cycling Association promotes a ride called the Western Express Route, connecting San Francisco to the TransAmerica Bicycle Trail in Pueblo, Colorado, passing straight through Winters along the way. The annual California North Coast Climate Ride, a nonprofit charity ride supporting sustainability, active transportation and environmental causes, passes through Davis and Sacramento along its route from Eureka to San Francisco. Yolo County Visitors Bureau lists and details a large handful of their “favorite rides” on their webpage. Map My Ride website also displays a selection of crowdsourced routes in the Winters area, and Davis’ LocalWiki website lists even more.

### **Bicycling in Yolo County**

According to the Yolo County Bicycle Transportation Plan, the county has long been a favorite area for bicycling, attributed to the flat terrain, mild climate, and short distances between cities. Bicycling occurs locally within the four cities of the county, in the rural land between cities, and to nearby places in the region such as Sacramento and Lake Berryessa. UC Davis is a large generator of bicycle traffic, and the town of Davis, with a prominent bicycling focus and reputation, contributes to the overall popularity of bicycling in the region as well. The county prioritizes a countywide bikeway network, much of which already exists in the form of extensive bike paths and rural agricultural roads. These bikeways are heavily traveled by cyclists who use the routes for commuting and recreation. UC Davis students and local community members are prominent travelers along these routes.

There are five existing bikeways in the unincorporated County. They have been constructed over the last 30 years and meet either Class I or Class II standards. In addition to the Class I and Class II bikeways listed below, a number of Class III bikeways exist as well.

- A route from Davis to West Sacramento, consisting of a Class I Caltrans-maintained bike path along the Interstate 80 causeway over the Yolo Bypass, and Class I and II sections of County Road 32A.
- A Class II bike lane along County Road 102 from Knights Landing to the eastern portion of Woodland and on to near Davis.
- A Class II bike lane along County Road 99 from the southern city limits of Woodland south approximately 5.5 miles to County Road 29, then east one mile to County Road 99D, then south on County Road 99D to the City of Davis.
- A Class II bike lane along County Road 31, County Road 93A, and Russell Boulevard between Davis and Winters.
- A Class I bike path along County Road 32 west from Davis to County Road 95A.

SACOG has published maps of existing and proposed bikeways in Yolo County. This plan is written under the assumption that these proposed bikeway improvements meet the needs of Winters and the surrounding region. There exists further need for an analysis of gaps in the bikeway system under the development and implementation of the proposed bicycle tourism plan.

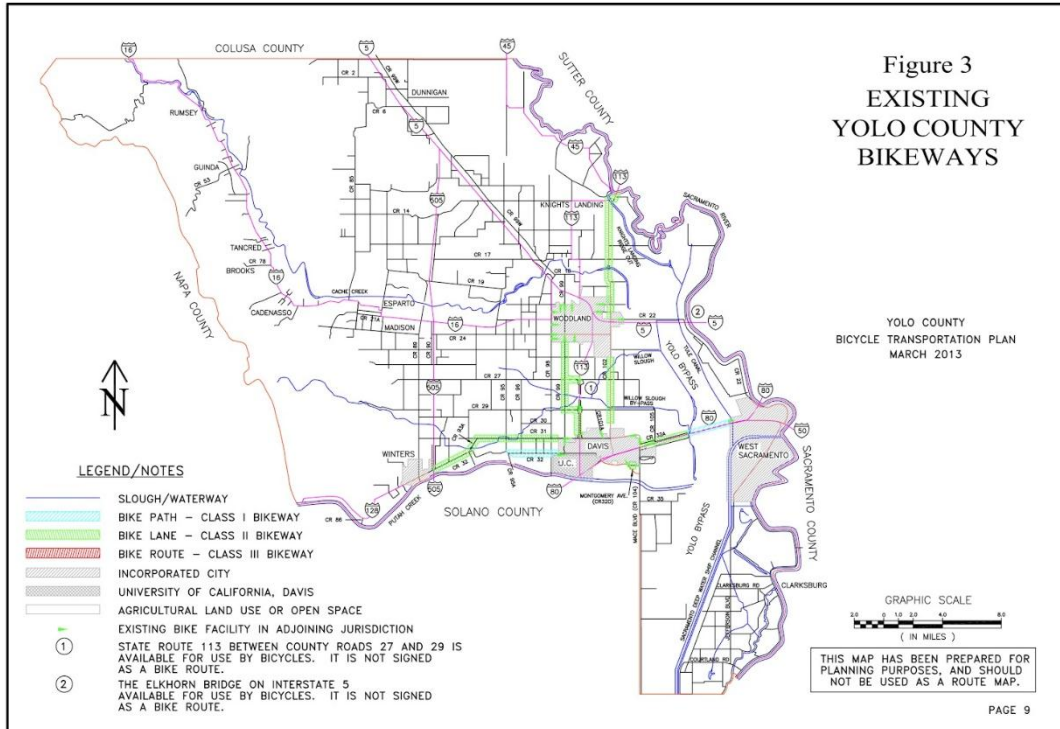


Figure 3: Existing Bikeways in Yolo County (SACOG, 2013)

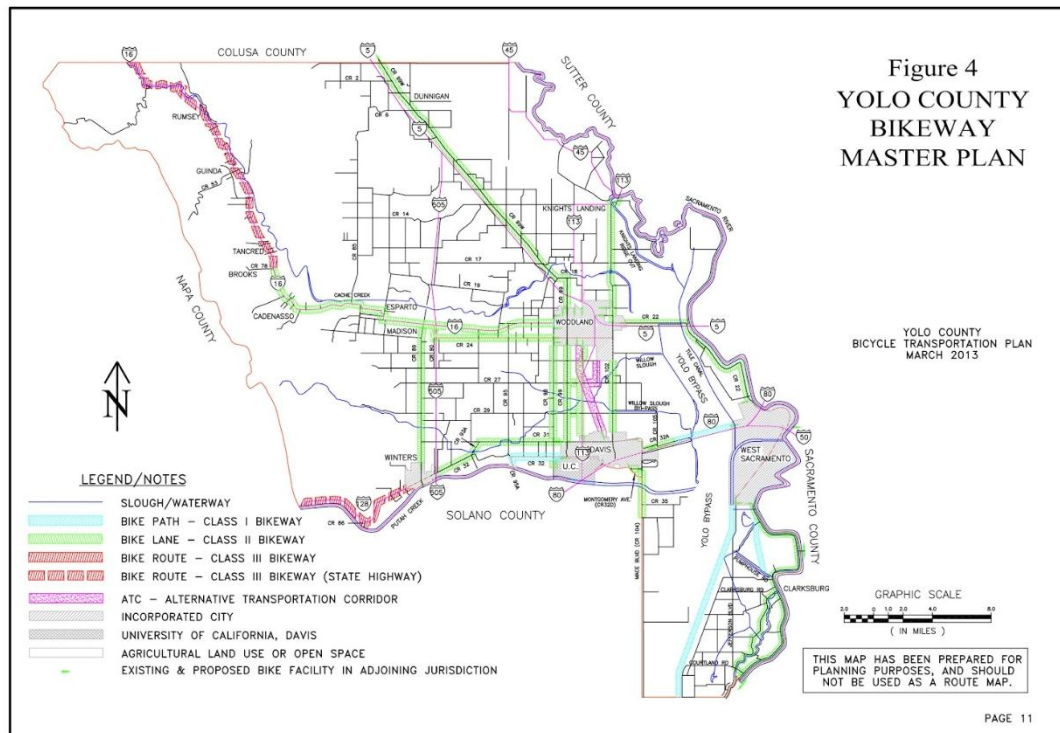
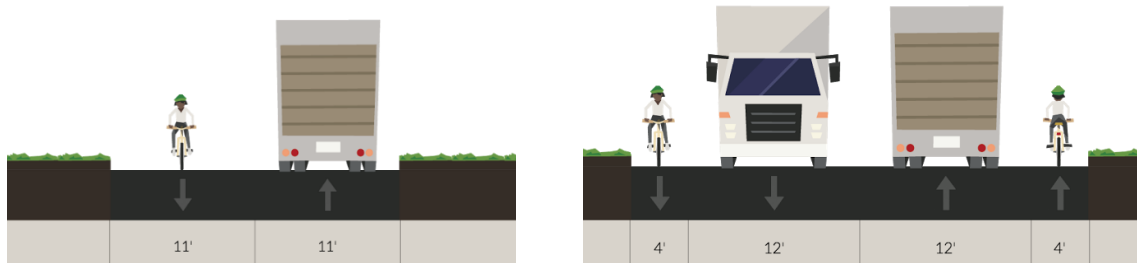


Figure 4: Proposed Bikeways in Yolo County (SACOG, 2013)

## Existing Roadway Sections

Existing roadways in the outlying areas of Winters are commonly 22 feet and 32 feet wide. A 22 foot roadway section only provides 11 feet for each direction of travel with no shoulder and no bike lane. This requires bicycles to share the vehicular travel lane. It also barely provides enough clearance when two heavy vehicles pass one another, assuming no bicycles are present. This does not provide a safe environment for bicyclists and not meet AASHTO recommendations, which suggest 12 feet for vehicular travel in each direction (especially when planning for high volumes of heavy vehicles), and a minimum 4 foot bike lane on each side.

The 32 foot roadway does allow sufficient space for 12 foot vehicular travel lanes in each direction, and meets the minimum 4 foot bike lane recommendation. No shoulder outside of the bike lane is present in this case.



*Figure 5: 22' and 32' Existing Roadway Sections*

This plan proposes widening of shoulders and construction of Class I bikeways where possible. Roadway sections under these conditions are pictured below. If widened to a 36 foot wide roadway, bike lanes could be expanded to five feet with a one foot painted or physical buffer between vehicular traffic and bicycle traffic. In the event of a planned Class I bicycle route, vehicles and cyclists could be separated completely, providing the safest possible alternative.



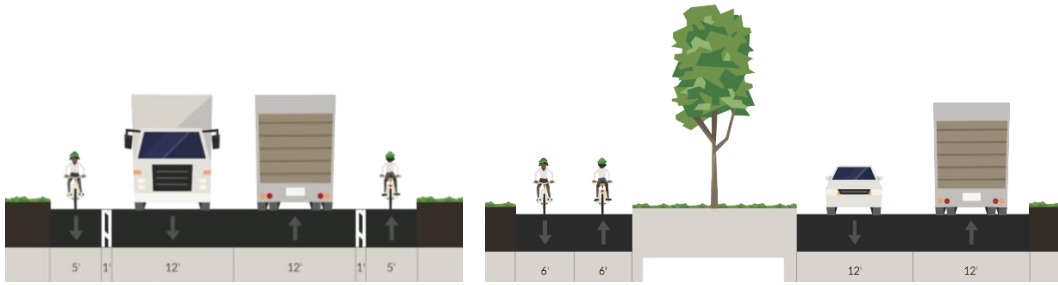


Figure 6: 36' and Class I Bikeway Proposed Roadway Sections

### Coordination and Consistency with Local and Regional Plans

The Bicycle Tourism Plan for Economic Development will be consistent with the other plans in effect in the area. Below is a summary of goals and objectives of other plans that are supportive of the Bicycle Tourism plan with regards to economic development, bicycle planning, tourism, and agritourism.

#### *Yolo County Strategic Plan*

- Champion jobs and economic opportunity
- Employ every citizen who wants to work
- Provide a variety of job opportunities
- Advance innovation
- Foster a network of internal, external, and regional partnerships
- Preserve and support the agricultural businesses and communities
- Create a vibrant and resilient agricultural economy
- Preserve sufficient farmland to maintain regional food security
- Identify new and local markets that can bring economic benefit
- Protect open space and the environment
- Expand community resources and enabling residents to make healthy lifestyle choices

#### *City of Winters General Plan*

- Orderly, well planned, and balanced growth
- Growth within a scale allowable by the city's infrastructure and service capabilities
- Preserve Winters' traditional small-town qualities, historical and agricultural heritage

- Increase residential and employment base
- Employ a land use pattern and design that facilitates the convenience of bicycle and pedestrian transportation
- Utilize infill development, update older buildings, place retail uses on ground level store fronts downtown
- Fostering a sense of community and a dense, walkable, safe downtown area
- Provide adequate commerce and provision of goods and services for visitors as well as residents
- Allow bed and breakfasts by discretionary review in the CBD
- Foster a connection between the City and the Chamber of Commerce to promote businesses
- Establish a safe and convenient system of bicycle routes
- Partner with surrounding jurisdictions to implement an area-wide bikeway system
- Include bicycle parking facilities as a requirement at new major public facilities and commercial sites
- Support activities that support agriculture such as farmers markets, on-site sale of produce, and special events supporting local agricultural products.

#### *Yolo County General Plan*

- Preserve and protect agricultural lands from development associated with the Bay Area, Sacramento, Interstate 80, UC Davis and Cache Creek Casino Resort
- Maintain and preserve the family nature of farm ownership and operation and the heritage of agriculture in the area
- Protect the regional consumption of locally grown food
- Continue and the value-added process of agricultural processing in the area
- Support tourism that showcases agricultural products and heritage in a manner that is complimentary to the rural environment
- Conduct regional coordination and marketing to directly connect local growers with potential customers
- Create an expanded system of safe and well maintained parks throughout Yolo County that are connected by a network of bike paths and multi-use trails
- Explore opportunities for ecotourism
- Develop and maintain a priority program to construct bikeways in conjunction with roadway projects

- Promote efficient and safe movement for agricultural equipment, and for the transport of agricultural goods
- Promote bicycle travel
- Foster a strong local economy and locate new and ongoing sources of tax revenue
- Allow for incentives to start new businesses
- Promote successful agricultural businesses
- Coordinate with UC Davis to accommodate joint business ventures

#### *Yolo County Bicycle Plan*

- Prioritize safe and efficient transport for all modes of travel, including bicycles, automobiles, trucks, and agricultural equipment
- Design complete streets that plan for all roadway users
- Connect existing paths to grocery stores, parks and community features and establish a looped off-street trail system and a complete bikeway system in each community
- Create a network of off-street multi-purpose trails that connect all cities, unincorporated communities, and scenic areas in the county
- Encourage use of trails for commute, recreational, and other trips
- Protect abandoned rail corridors for re-use as trails and other forms of alternative transportation
- Develop bikeways in conjunction with roadway developments
- Inventory of bikeways
- Complete list of projects, ranked in priority level, is included as an appendix
- Cross sections for rural areas as well as community areas
- Maintenance of highway shoulder areas as a safety measure for visiting and commuting cyclists

#### *Gateway Master Plan*

- Provides for restaurants, service stations, hotels and motels, retail and amusement uses in parcels adjacent to Interstate 505
- Orientation will be principally to highway and through traffic
- Development may also include offices, light industrial, and wholesale commercial uses, public and quasi-public uses such as boat or RV sales businesses, U Haul rental service, retail showroom oriented shops, or motels

### *Sacramento Region Bicycle, Pedestrian and Trails Master Plan*

- Envisions a transportation system that supports healthy living and active communities where bicycling and walking are viable and popular travel choices in a comprehensive, safe and convenient network
- Develop a continuous bicycle and pedestrian network by removing barriers, adding crossings, filling gaps, and connecting spurs to existing networks
- Create a regional wayfinding system
- Maintain bikeways and improve bicycle and pedestrian safety
- Support programs aimed at increasing bicycle and walking trips by providing incentives, recognition, or services that make bicycling and walking more convenient transportation modes
- Encourage strategic location of new bicycle and pedestrian facilities where existing or planned development patterns offer the greatest opportunity for high use
- Involve community and business organization in siting locations for support facilities, e.g. bike corrals, lockers, bike parking, showers, bike storage, water fountains
- Promote public and stakeholder awareness of widespread benefits affiliated with bicycle and pedestrian infrastructure, including increased public health, property values, recreation benefits, and environmental benefits.
- Define a comprehensive regional bicycling network that connects jurisdictions, provides connections to transit priority areas, major activity centers and business districts, considers state designated bike routes, utilizes Rails-to-Trails when feasible
- Increase collection of bicycle and pedestrian related data, maintain an inventory of facilities and safety data, include bike and pedestrian modes as part of regular traffic counts
- Increase collaboration among stakeholders throughout the region to seek funding and implement bicycle and pedestrian projects, programs, and related efforts

### *City of Winters Bikeway System Master Plan*

- Aims for 132 bicycle trips per day by 2025
- Maps key areas of bicycle interest: bikeways and bike routes, crash sites, bicycling destinations
- Develop and plan a bikeway system that reduces vehicle congestion, improves air quality and improves individual physical fitness

- Involve the community in planning and development of the bikeway system
- Encourage a community culture that supports the use of bicycling as a major form of transportation throughout the city, including provision of the appropriate infrastructure, parking, signage, and lane markings
- Establish a well-connected bikeway system that is integrated with other modes of transportation and other alternative modes of transportation







## V. TEMPLATE BICYCLE TOURISM PLAN FOR ECONOMIC DEVELOPMENT IN RURAL AGRICULTURAL TOWNS: Goals, Objectives & Recommendations

**Goal I: An attractive, feasible and thriving place for visitors that attracts travelers as a destination and draws in passers-by.**

**Objective:** Cultivate unique assets, industries, events, and historic and scenic sites as touristic attractions.

### *Recommendations for local and regional governments*

- Restore and maintain historical buildings, parks, downtown areas and points of interest
- Highlight unique assets with educational opportunities, museums, events and activities. These assets may include agriculture, farms, mountains, beaches, geology, natural features, history, architecture, etc.
- Develop a museum that explains the history of the area
- Allow for the planning of local events that highlight these unique assets: harvest festivals, art and wine festivals, surf competitions, parades, county fairs etc.

### *Recommendations for local businesses*

- Highlight and sell local products
- Offer classes and events that educate and inform on your specialty products: cheese making, honey tasting, olive oil sampling, quilt making
- Offer wine club memberships and recurring events

**Objective:** Attract local, regional and international tourism in a sustainable manner that aligns with the size, scale, character, constraints, and natural attractions of your town.

### *Recommendations for local and regional governments*

- Develop a tourism plan that guides your community's efforts in terms of direction, scale, and timeframe of tourism development, offers incentives for and removes barriers to the development of hospitality related businesses
- Establish main attractions and develop access to and from by means of shuttle, bicycle, trail or private car



- Create promotional material that advertises main attractions and place it in print and web form where it will attract potential visitors
- Develop a Visitor's Bureau that will operate and manage communications with potential and visiting tourists
- Advertise the assets identified in the previous objective as touristic offerings regionally and locally via print and web platforms
- Include welcome and wayfinding signage in the region and downtown area, directing visitors to lodging, fuel, and points of interest
- Create a regional tourism program by linking attractions, events, and tourism amenities of neighboring towns via collaborative planning, regional tourism maps, and advertising exchange
- Allocate a downtown storefront to be used as a visitor's center and the office of the visitor's bureau
- Create a visitor's website that is linked to the City website

*Recommendations for local businesses*

- Become an active member of the visitor's bureau to guide future tourism and champion new touristic attractions
- Offer internet access at for traveling customers
- Keep a list of nearby attractions and recommend them to your visitors
- Keep a contact list for visitors and invite them to upcoming events

*Recommendation for the Visitor's Bureau*

- Work with local businesses, farms, and governments to inventory and advertise local attractions, services, establishments and lodgings
- Maintain a website that may be used as a complete reference of touristic attractions
- Create a map of local and regional attractions, lodging, outdoor activities and points of interest to be distributed to local business establishments and visitor's centers
- Increase visibility and reach in local media and promotional material

**Objective:** Establish your town as an attractive, feasible, and recognized overnight stop for bicycle tourists by adding, retaining and diversifying necessary amenities for bicycle tourism hospitality.

*Recommendations for local and regional governments*

- In the event of no existing campground, identify and facilitate provision of sleeping space for visitors in a community center, church, or open space, either for free, by donation, or for a small charge
- Champion the building and maintenance of a campground, preferably with showers
- Allow for and incentivize the development and operation of a hostel, hotel or bed & breakfast
- Plan for and install sufficient and secure bicycle parking
- Include welcome and wayfinding signage in the downtown area that is uniform, visually informative, readable and user friendly
- Identify a downtown water spigot or fountain that bicycle tourists may use
- Incentivize local businesses to adopt bike-tourist friendly recommendations
- Establish a system of collecting data for future metrics and benefit-cost analysis for bicycle tourism that can inform policy decision on its effectiveness, including but not limited to bicycle counts on roadways and at agritourism destinations, number of miles of effective bike lanes and paths, TOT tax revenue from bicycle tourists, and additional bicycle tourist revenues

*Recommendations for local businesses*

- Keep a small selection of bicycle parts and tools on hand for customers to use
- Offer items that will appeal to cyclists and athletes, such as healthy meals and snacks, power bars, fruit, craft beer and wine
- Offer wireless internet for traveling customers
- Offer secure bicycle storage, including visible bike racks, bike lockers, and hotel rooms that allow and accommodate bicycle storage inside

*Recommendation for the Visitor's Bureau*

- Maintain a guest book where bicycle travelers may log their names, origins, destinations, and hometown
- Keep a visitor's posting board where bicycle tourists may communicate with one another and post messages for other travelers

- Connect with Adventure Cycling Association and other bicycle media, nonprofits and organizations
- Utilize the asset of proximity to established bicycle routes, Highway 1 bicycle route, or other nearby bicycle thoroughfares and attractions
- Distribute lists and maps of your town’s bicycle amenities and services, at libraries, visitor’s centers, cafes, bike shops, etc., in neighboring towns and along nearby bicycle routes
- Update the Visitor’s Bureau website with information for cyclists, lists of services, maps, and a welcome message
- Add your town to the Adventure Cycling route by contacting the Routes and Mapping department
- Engage with the bike travel community via online platforms, social media, and word of mouth with travelers

**Goal II: A bicycle friendly community and region where cycling is a safe, efficient, feasible, and affordable means of touring the area.**

**Objective:** Establish a Bicycle Plan that establishes your community’s desires and boundaries for development with regards to locals and visitors.

*Recommendations for Local and Regional Government*

- Facilitate the writing of a bicycle plan that coordinates with other nearby governments to create a strong regional bicycle network
- Emphasize the need for safe and comfortable bicycle routes that may be used and enjoyed by users of all ability levels
- Identify routes for multi-purpose trails and bike lanes connecting amenities such as campgrounds, lodging, grocery stores, restaurants, and downtown areas
- Promote bicycle travel and tourism as an important part of the economy
- Create “complete streets” policies that dedicate funding to bicycle infrastructure at the time of roadway improvement projects
- Maintain the entire width of roadways, especially shoulders, in City and County maintenance efforts

*Recommendations for Local Businesses*

- Participate in the bicycle planning process by attending council meetings, outreach events and community workshops

- Provide policymakers with input and recommendations for development that will help your business

*Recommendations for the Visitor's Bureau:*

- Participate in the bicycle planning process by attending council meetings, outreach events and community workshops
- Provide policymakers with input and recommendations that will encourage bicycling by visitors
- Encourage the development of bicycle infrastructure and amenities near touristic attractions

**Objective:** Cultivate bicycle friendliness.

*Recommendations for Local and Regional Government*

- Educate businesses and residents on the value and potential of cycling and bicycle tourists to enhance their understanding and hospitality.
- Incentivize and encourage bicycle parking outside local businesses, including bike racks, bicycle parking stalls,
- Incentivize and encourage the presence of basic tools and supplies (flat repair kit, pump, innertubes, maps, etc.) in businesses of all types that cyclists may visit (cafes, breweries, etc. in addition to bike shops).
- Take steps toward application for designation as a Bicycle Friendly City with the League of American Bicyclists

*Recommendations for Local Businesses*

- Provide signage for local businesses that advertise "bicyclists welcome," "bike tools available," "repair kits available," "internet," etc.
- Offer "bike boxes" ([http://www.24hrbikeshop.com/Bike\\_Box.html](http://www.24hrbikeshop.com/Bike_Box.html))

**Objective:** Provide the tools and inspiration for visitors to travel by bicycle.

*Recommendations for Local and Regional Government*

- Expand and integrate bike-travel networks in the surrounding area
- Ensure that trails and bike routes connect touristic attractions such as lodging, campgrounds, historical points of interest, downtown areas, museums, outdoor recreation, visitors centers, etc.
- Include areas of touristic activity (lodging, visitors center, monuments, museums, attractions, outdoor recreation areas) as points of activity in your town's Bicycle Plan to ensure their inclusion in the bicycle planning process
- Attract, develop and retain a satisfied and high-quality network of bicycle amenity and service business owners and workforce
- Maintain roadway shoulders along these routes, including pavement, obstructions and debris
- Establish bicycle parking in public areas
- Allow permits for bicycle parking stalls to replace on-street parking spaces in select areas
- Encourage and allow bike shops, bicycle maintenance facilities and bicycle rental businesses
- Install self-serve bicycle service stations in downtown and remote areas with high visitor volume

*Recommendations for Local Businesses*

- Allow for easy and safe bicycle parking near, inside and in front of your business
- Offer bicycles that may be rented or borrowed by the hour or by the day
- Offer bicycle tours and services that provide unique travel and learning experiences
- Provide a selection of gear and maps for travelers who want to cycle

*Recommendations for the Visitor's Bureau*

- Work with local cyclists to establish 5-10 cycling routes, of varying difficulties and with differing points of interest, and map them out for visitors
- Continue to create new exciting and scenic cycling routes
- Provide the best possible digital, mobile, and paper-based resources to support bicycle travel
- Provide a selection of gear and maps for travelers who want to cycle
- Offer bicycles that may be rented or borrowed by the hour or by the day

- Work with local universities or tech companies to adapt cycling routes and maps to be created, updated, utilized, and distributed through mobile platforms in addition to paper

**Goal III: A thriving agricultural community that integrates with bicycle tourism and welcomes visitors.**

**Objective:** Protect local agricultural lands and communities with regards to sprawl from surrounding communities, development by public and private entities, and ensure a stable local food system.

*Recommendations for Local and Regional Government*

- Establish land use regulations protecting farmlands and agricultural areas from future development
- Encourage the consumption of locally sourced agricultural products by means of marketing, policy and supply
- Allow and encourage farms and agricultural areas to offer on-site sale of products
- Allow and encourage farmers markets in downtown or public areas

*Recommendations for Local Businesses*

- Use and promote locally grown goods in restaurant menus
- Sell locally produced goods in grocery stores and shops
- Establish relationships with other local farms, agricultural producers, and other businesses

**Objective:** Establish a mutually beneficial relationship between tourism and agricultural operations.

*Recommendations for Local and Regional Government*

- Develop an incentive program to encourage and inspire local farms to welcome visitors onto their property
- Educate farms on the benefits that may come from hosting visitors
- Establish a template plan that farms may adopt and adapt to their particular needs, circumstances and constraints

- Plan, construct and maintain bike lanes and routes that connect and lead to farms and agricultural areas

#### *Recommendations for Farm Owners and Operators*

- Establish activities for which visitors may come to your farm: tours, classes, harvests, etc. that show the public what you do, how you do it, and/or the history of the operation
- Advertise the activities you choose to offer with the help of the visitor's bureau and in local newspapers
- Create a website for your farm that includes photos, events, and a description of what makes your farm unique
- Host annual events that are open to the public, such as harvests, corn mazes, pumpkin patches, or apple picking
- Host dinner events where visitors may enjoy a locally grown meal at your farm
- Set up a guest room where visitors may book an overnight stay
- Contact the visitor's bureau to be sure they are aware of your touristic offerings
- Ensure that bike lanes and bike routes are well maintained and free of debris en route to your location and within roads on your site
- Advise drivers who transport your goods and products of the presence of bicyclists and tourists on site and on roads within and around your property

#### *Recommendations for the Visitor's Bureau*

- Work with local farms to identify their unique attributes and establish a plan for accommodating visitors
- Advertise the farms' offerings along with other tourism activities in maps, brochures, and websites
- Advise visitors of the farms, their unique attributes, and the reasons to visit

## **VI. BICYCLE TOURISM PLAN FOR ECONOMIC DEVELOPMENT IN WINTERS, CA: Goals, Objectives and Recommendations**

**Goal I: An attractive, feasible and thriving place for visitors that attracts travelers as a destination and draws in passers-by.**

The City of Winters offers a unique and quaint setting and currently supports a small tourism industry, as well as an active Visitor's Bureau and Discover Winters association. The successful designation of Berryessa Snow Mountain would increase tourism in Winters by roughly 20-30 percent, as outlined in the background section of this report and in the Berryessa Snow Mountain Economic Impact Report. If this designation goes through, it will be crucial that Winters plans accordingly in order to adapt to the increased visitor base, successfully capture the associated potential economic benefits, and provide adequate, efficient and pleasant visitor amenities.

**Objective 1.1:** Cultivate unique assets, industries, events, and historic and scenic sites as touristic attractions.

### *Recommendations for the City of Winters, the County of Yolo and SAGOG*

- Continue careful and thorough restoration and maintenance of historical buildings, parks, downtown areas and points of interest
- Cultivate educational opportunities, exhibits, events and activities that highlight the existing assets of the area, including but not limited to agriculture, farms, nut production, winemaking, cheesemaking, history, architecture, Berryessa Snow Mountain and the surrounding natural area
- Promote the development of a museum that explains the history of the area
- Encourage and incentivize the development of an indoor, year-round, collective open-air marketplace that vends local products at individual booths
- Allow for the planning of local events that highlight these unique assets: harvest festivals, art and wine festivals, surf competitions, parades, county fairs etc.
- Remove barriers and offer incentives for commercial, educational, and historical entities who support the above policies that seek to locate in the area



*Recommendations for local businesses*

- Highlight and sell local products including honey, nuts, wine, sunflowers, fruits, tomatoes and olives
- Offer classes and events that educate and inform on local specialty products: cheese making, honey tasting, beekeeping, olive oil sampling, quilt making, wine making, beer making
- Offer wine club memberships and recurring events that foster repeat visits and a sense of excitement and community

**Objective 1.2:** Attract local, regional and international tourism in a sustainable manner that aligns with the size, scale, character, constraints, and natural attractions of Winters.

*Recommendations for the City of Winters, the County of Yolo and SAGOG*

- Adopt a tourism plan that guides Winters' efforts in terms of direction, scale, and timeframe of tourism development
- Identify main attractions, including but not limited to Berryessa Snow Mountain area, historic downtown, and neighboring wineries and farms, and develop access to and from these locations by means of shuttle, bicycle route, or trail
- Develop or contract the development of promotional material in web and print form that advertises local touristic attractions
- Continue to support the Visitor's Bureau, who will operate and manage communications with potential and visiting tourists
- Include welcome and wayfinding signage in the region and downtown area, directing visitors to lodging, fuel, and historic downtown area, Berryessa Snow Mountain area, outskirt agricultural areas, etc.
- Create a regional tourism program by linking Winters' attractions, events, and tourism amenities to those of neighboring towns (Sacramento, Davis, Sonoma, Napa, and San Francisco) via collaborative planning, regional tourism maps, and advertising exchange
- Allocate a downtown storefront to be used as a visitor's center and the office of the visitor's bureau

*Recommendations for local businesses*

- Become an active member of the visitor's bureau and Discover Winters in order to guide future tourism, champion new touristic attractions, be informed of events and advertise your own events
- Offer internet access for traveling customers
- Keep a list of nearby attractions and recommend them to your visitors
- Keep a contact list for visitors and invite them to upcoming events

*Recommendation for the Visitor's Bureau*

- Work with local businesses, farms, businesses, and governments to inventory and advertise local attractions, services, establishments and lodgings
- Maintain a website that may be used as a complete reference of touristic attractions
- Create a map of local and regional attractions, lodging, outdoor activities and points of interest to be distributed to local business establishments and visitor's centers
- Increase visibility and reach in local media and promotional material

**Objective 1.3:** Establish Winters as an attractive, feasible, and recognized overnight stop for bicycle tourists by adding, retaining and diversifying necessary amenities for bicycle tourism hospitality.

*Recommendations for the City of Winters, the County of Yolo and SAGOG*

- Ensure continued maintenance of Solano Campground
- Allow for and incentivize the development and operation of a hostel, additional inns, hotels or bed & breakfasts, to a point that will accommodate projected tourism levels, welcome bicycle tourists and allow in-room bicycle storage
- Plan for and install sufficient and secure bicycle parking
- Include welcome and wayfinding signage that is uniform, visually informative, readable and user friendly, in the downtown area, outskirts agricultural areas, and directional signage to Berryessa Snow Mountain area, Stebbins Cold Canyon hiking area, Cache Creek Regional Park, Berryessa Gap Winery and Berryessa Brewing Company, Davis and Sacramento
- Identify a downtown water spigot or fountain that bicycle tourists may use
- Incentivize local businesses to adopt bike-tourist friendly recommendations
- Establish a system of collecting data for future metrics and benefit-cost analysis for bicycle tourism that can inform policy decision on its effectiveness, including but not

limited to bicycle counts on roadways and at agritourism destinations, number of miles of effective bike lanes and paths, TOT tax revenue from bicycle tourists, and additional bicycle tourist revenues

*Recommendations for local businesses*

- Keep a small selection of bicycle parts and tools on hand for customers to use
- Offer items that will appeal to cyclists and athletes, such as healthy meals and snacks, power bars, fruit, craft beer and wine
- Offer wireless internet for traveling customers
- Offer secure bicycle storage, including visible bike racks, bike lockers, and hotel rooms that allow and accommodate bicycle storage inside

*Recommendation for the Visitor's Bureau*

- Maintain a guest book where bicycle travelers may log their names, origins, destinations, and hometown
- Keep a visitor's posting board where bicycle tourists may communicate with one another and post messages for other travelers
- Connect with Adventure Cycling Association and other bicycle media, nonprofits and organizations
- Utilize the asset of proximity to established bicycle routes, Highway 1 bicycle route, or other nearby bicycle thoroughfares and attractions
- Distribute lists and maps of your town's bicycle amenities and services, at libraries, visitor's centers, cafes, bike shops, etc., in neighboring towns and along nearby bicycle routes
- Update the Visitor's Bureau website with information for cyclists, lists of services, maps, and a welcome message
- Add your town to the Adventure Cycling route by contacting the Routes and Mapping department
- Engage with the bike travel community via online platforms, social media, and word of mouth with travelers

**Goal II: A bicycle friendly community and region where cycling is a safe, efficient, feasible, and affordable means of touring Winters and the surrounding area.**

Winters is home to a thriving bicycle community and a strong bicycle plan. Strengthened by the existing regional focus on cycling, flat and easily navigable topography, a strong network of rural agricultural roads, an existing expansive network of multi-use trails in the county, and the prominence of cycling at nearby UC Davis and surrounding towns and cities, Winters is ideally set up for cycling. Concerns to consider include the high volume of heavy vehicle and recreational vehicle traffic along roadways and highways. Many roadway users haul boats on trailers to Berryessa Lake, causing a danger for cyclists.

**Objective 2.1:** Maintain local and regional bicycle plans that establish the area's desires and boundaries for bicycle-related development.

*Recommendations for the City of Winters, the County of Yolo and SAGOG*

- Maintain and update existing bicycle plans
- Continue coordination between municipalities for a strong regional bicycle network
- Continue to identify routes for multi-purpose trails and bike lanes
- Support and facilitate the funding, building, improvement, and maintenance of bikeways
- Promote bicycle travel and tourism as an important part of the economy
- Create roadway design guidelines to safely accommodate both large vehicles and bicyclists

*Recommendations for Local Businesses*

- Participate in the bicycle planning process by attending council meetings, outreach events and community workshops
- Provide policymakers with input and recommendations for future development that will serve your business

*Recommendations for the Visitor's Bureau:*

- Participate in the bicycle planning process by attending council meetings, outreach events and community workshops
- Provide policymakers with input and recommendations that will encourage bicycling by visitors
- Encourage the development of bicycle infrastructure and amenities near touristic attractions

**Objective 2.2:** Cultivate continued bicycle friendliness in Winters and the surrounding area.

*Recommendations for the City of Winters, the County of Yolo and SAGOG*

- Educate businesses and residents on the importance of cycling, bicycle safety, and the potential of cycling and bicycle tourists to impact the economy, in order to enhance their understanding and hospitality
- Incentivize and encourage bicycle parking outside local businesses, including bike racks and stalls
- Incentivize and encourage the presence of basic tools and supplies (flat repair kit, pump, innertubes, maps, etc.) in businesses of all types that cyclists may visit (cafes, breweries, fresh produce markets, delis, etc. in addition to bike shops)
- Take steps toward application for designation as a Bicycle Friendly City with the League of American Bicyclists

*Recommendations for Local Businesses*

- Provide signage for local businesses that advertise “bicyclists welcome,” “bike tools available,” “repair kits available,” “internet,” etc.
- Offer “bike boxes” ([http://www.24hrbikeshop.com/Bike\\_Box.html](http://www.24hrbikeshop.com/Bike_Box.html))

**Objective 2.3:** Provide the tools and inspiration for visitors to tour the Winters area by bicycle.

*Recommendations for the City of Winters, the County of Yolo and SAGOG*

- Continue to expand and integrate bike-travel networks in the surrounding area
- Ensure that trails and bike routes connect touristic attractions such as the Inn at Park Winters, Solano Campground, historic downtown Winters, Berryessa Gap Winery and

Berryessa Brewing Company, Berryessa Snow Mountain area, other established points of interest, museums, outdoor recreation, visitors centers, etc.

- Include areas of touristic activity (lodging, campground, visitors center, museums, wine tasting rooms, outdoor recreation areas) as points of activity in the City of Winters Bikeway System Master Plan to ensure their inclusion in the bicycle planning process
- Maintain roadway shoulders along these routes, including pavement, obstructions and debris
- Pave and widen shoulders along bike routes and consider buffered bicycle lanes or separated bike paths
- Establish safe and secure bicycle parking in these areas
- Attract, develop and retain a satisfied and high-quality network of bicycle amenity and service business owners and workforce
- Allow permits for bicycle parking stalls to replace on-street parking spaces in select areas
- Encourage and allow bike shops, bicycle maintenance facilities and bicycle rental businesses
- Install self-serve bicycle service stations in downtown and remote areas with high visitor volume
- Incentivize a bicycle rental business or a bicycle share program in the region

#### *Recommendations for Local Businesses*

- Allow for easy and safe bicycle parking near, inside and in front of your business
- Offer bicycles that may be rented or borrowed by the hour or by the day
- Offer bicycle tours and services that provide unique travel and learning experiences
- Provide a selection of gear and maps for travelers who want to cycle

#### *Recommendations for the Visitor's Bureau*

- Create a map listing popular cycling routes, of varying difficulties and highlighting a variety points of interest: one for children, one for wine tasting, one for scenic beauty, etc.
- Continue to create new exciting and scenic cycling routes
- Provide a selection of gear and maps for travelers who want to cycle
- Offer bicycles that may be rented or borrowed by the hour or by the day
- Work with UC Davis' Computer Science department or the Sacramento Hacker Lab to generate a mobile app that provides maps and routes to guide tourists and cyclists to various points of interest along established routes

**Goal III: A continued thriving agricultural community that integrates with bicycle tourism and welcomes visitors.**

Winters is the established home to a thriving and important agricultural region. Protection of these lands is identified as a priority in local and regional legislative and planning efforts. This goal aims to develop a mutually beneficial relationship between visitors and agricultural areas where farms may generate increased revenue and visitors may learn the value of the local food system.

**Objective 3.1:** Continue the protection local agricultural lands and communities from sprawl from surrounding communities and development by public and private entities to ensure a stable local food system.

*Recommendations for the City of Winters, the County of Yolo and SAGOG*

- Continue to support land use regulations protecting farmlands and agricultural areas from future development
- Encourage the consumption of locally sourced agricultural products by means of marketing, policy and supply
- Allow and incentivize the on-site sale of agricultural products, produce and goods
- Allow and incentivize farmers markets in the historic downtown area, in local parks and public areas
- Incentivize farmers to sell produce and goods and/or host a booth at the proposed open-air market in downtown Winters

*Recommendations for Local Businesses*

- Use and promote locally grown goods in restaurant menus
- Sell locally produced goods in grocery stores and shops
- Establish relationships with local farms and agricultural producers to facilitate communication, camaraderie, and mutual understanding

**Objective 3.2:** Establish a mutually beneficial relationship between Winters tourism and nearby agricultural operations.

*Recommendations for the City of Winters, the County of Yolo and SAGOG*

- Develop an incentive program to encourage and inspire local farms to welcome visitors onto their property
- Educate farms on the benefits that may come from hosting visitors
- Establish a template plan that farms may adopt and adapt to their particular needs, circumstances and constraints
- Ensure that bike lanes and bike routes are well maintained en route to farms and agricultural areas
- Plan and construct bicycle lanes where they do not currently exist

*Recommendations for Farm Owners and Operators*

- Establish activities for which visitors may come to your farm: tours, classes, harvests, etc. that show the public what you do, how you do it, and the history of the operation
- Advertise the activities you choose to offer with the help of the visitor's bureau and in local newspapers
- Create a website for your farm that includes photos, events, and a description of what makes your farm unique
- Host annual events that are open to the public, such as harvests, corn mazes, pumpkin patches, or fruit picking
- Host dinner events where visitors may enjoy a locally grown meal at your farm
- Set up a guest room where visitors may book an overnight stay
- Contact the visitor's bureau to make them aware of your touristic offerings
- Plan and construct bicycle lanes where they do not currently exist
- Ensure that bike lanes and bike routes are well maintained and free of debris en route to your location and within roads on your site
- Advise drivers who transport your goods and products of the presence of bicyclists and tourists on site and on roads within and around your property



*Recommendations for the Visitor's Bureau*

- Work with local farms to identify their unique attributes and establish a plan for accommodating visitors
- Advertise the farms' offerings along with other tourism activities in maps, brochures, and websites
- Advise visitors of the farms, their unique attributes, and the reasons to visit

**Table 4: Summary and Phasing of Recommendations**

<p>Phase 1</p>	<ul style="list-style-type: none"> <li>• <b>Allow and offer incentives to new businesses wanting to locate in the region as well as the planning of local events whose values and mission align with the goals of bicycle agritourism.</b> New businesses could include new bike shops, bicycle rental facilities, bicycle friendly establishments of any kind, and farms who wish to accept visitors. New events could include bicycle races wishing to pass through the area, the introduction of an annual local ride, or new local farm festivals. Incentives could come in the form of streamlining or expediting of the permitting process, waived or reduced fees, planning assistance and coordination, or other help.</li> <li>• <b>Develop a system for maintenance and sweeping of shoulders and bikeways.</b> This will drastically improve bicyclist safety and comfort, and is a low-cost program with high return. Streetsweeping may already be occurring for roadway maintenance or stormwater management, and could easily be adapted to benefit cyclists.</li> <li>• <b>Attract and provide direction for tourists.</b> Create a printed map of tourist destinations (agritourism, recreational areas, restaurants and cafes, museums and historical landmarks, etc.) and distribute them to bike shops, hotels, bed and breakfasts, the visitor's bureau, and local businesses. Coordinate regionally to advertise touristic offerings via brochures and websites, informing travelers of the accommodations and attractions available.</li> </ul>
<p>Phase 2</p>	<ul style="list-style-type: none"> <li>• <b>Expand and widen shoulders along key highways and bike routes.</b> Adequate shoulder width is the most crucial variable that affects cyclist safety. Shoulders at least 4 feet wide and up to 7 feet wide (in addition to 12 foot vehicle lanes) that are comprised of smooth, continuous pavement that is well maintained and free of cracks provides a good cycling environment.</li> <li>• <b>Implement a tourism plan that will guide future desires and constraints for tourism.</b> Adoption of a plan will outline future tourism and ensure that the type and quantity of tourism is aligned with the size, scale, attributes and desires of the region.</li> <li>• <b>Implement a network of wayfinding signage that directs visitors and locals to important destinations.</b> Use signage that is easy to read and is consistent across the city or region for maximum effectiveness and user friendliness.</li> <li>• <b>Establish a method for retaining metrics on bicycle tourism.</b> Count cyclists on major bike routes, count cycle tourists at hotels and campgrounds, keep track of TOT generated from cycle tourists, count bicycles rented or visits to bike shops</li> </ul>

Phase 3	<ul style="list-style-type: none"><li data-bbox="602 197 1406 317">• <b>Expand the regional network of Class I bikeways.</b> Separation from vehicular traffic provides the safest possible cycling environment and attracts a wider variety of users, including families, children and inexperienced cyclists.</li><li data-bbox="602 352 1406 533">• <b>Create a tourism wayfinding map that is available as a mobile application.</b> This app may display bicycle routes, farms and agritourism destinations, recreational areas, restaurants and cafes, museums and historical landmarks, and other points of interest. It may allow the user to select destinations and bike routes by genre, proximity, distance, or intensity level.</li><li data-bbox="602 569 1406 716">• <b>Host regional or city-wide agritourism or bicycle events.</b> Farmers markets, bike month, bike-to-work day, agricultural festivals, and parades all enhance visibility of cycling and agritourism and establish a town as a destination for these activities.</li></ul>
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## **VII. WEBSITES AND RESOURCES FOR BICYCLE TOURISM AND PLANNING**

Adventure Cycling Association: [adventurecycling.org](http://adventurecycling.org)

The Path Less Pedaled: [pathlesspedaled.com](http://pathlesspedaled.com)

Bike Boxes: [24hrbikeshop.com/Bike\\_Box.html](http://24hrbikeshop.com/Bike_Box.html)

Warm Showers: A community for touring cyclists and hosts: [warmshowers.org](http://warmshowers.org)

Hike or Bike Campsites: [parks.ca.gov/?page\\_id=26837](http://parks.ca.gov/?page_id=26837)

Bike Overnights Blog: [bikeovernights.org](http://bikeovernights.org)

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